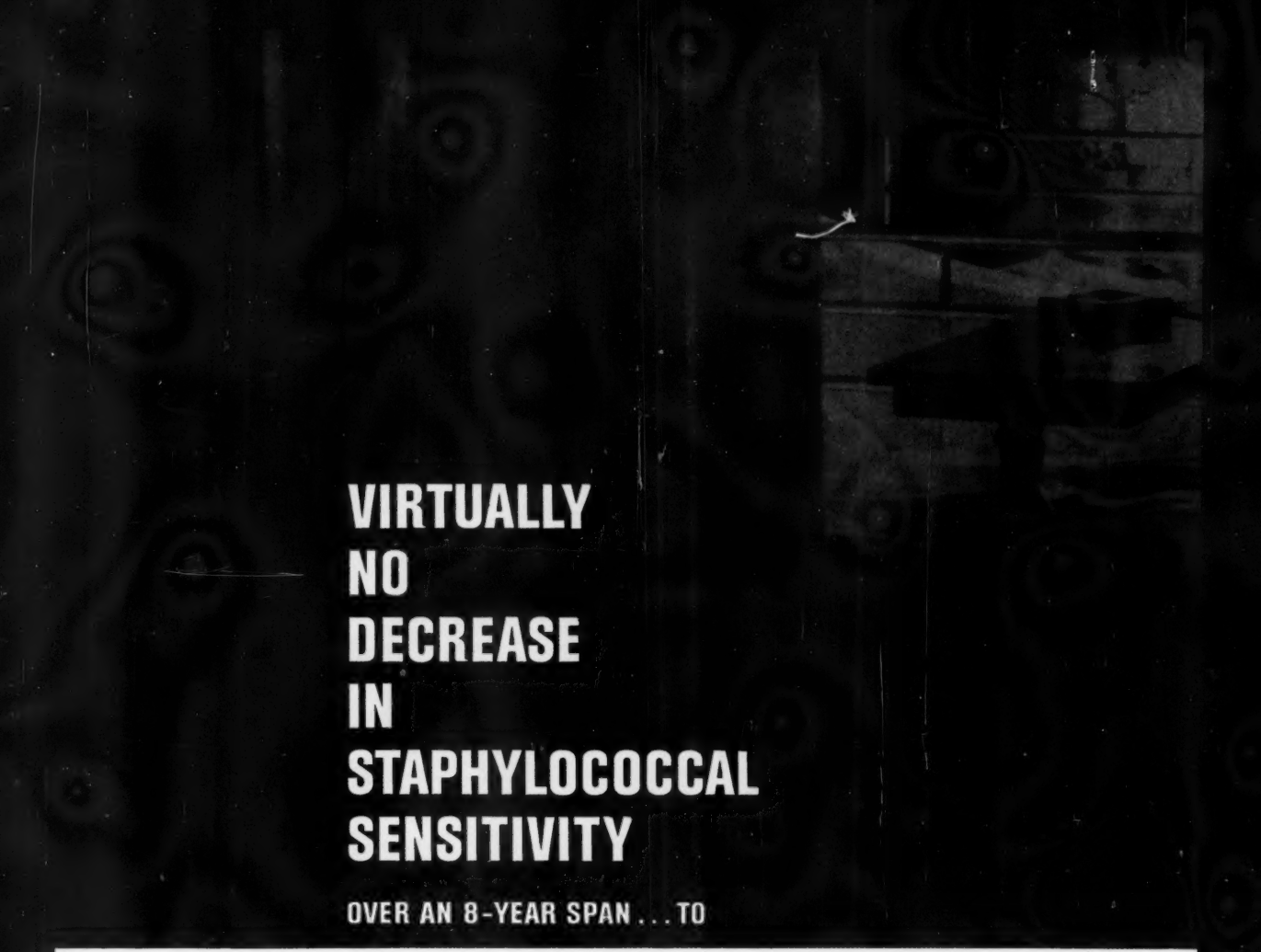
the Journal
MICHIGAN
STATE MEDICAL SOCIETY
September, 1960 Volume 59, Number 9

BETTER MENTAL HEALTH THROUGH MEDICAL TEAMWORK



VIRTUALLY NO DECREASE IN STAPHYLOCOCCAL SENSITIVITY

OVER AN 8-YEAR SPAN . . . TO

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

An outstanding and frequently reported characteristic of CHLOROMYCETIN[1-8] "...is the fact that the very great majority of the so-called resistant staphylococci are susceptible to its action."[1] In describing their study, Rebhan and Edwards[2] state that "...only a small percentage of strains have shown resistance..." to CHLOROMYCETIN, despite steadily increasing use of the drug over the years.

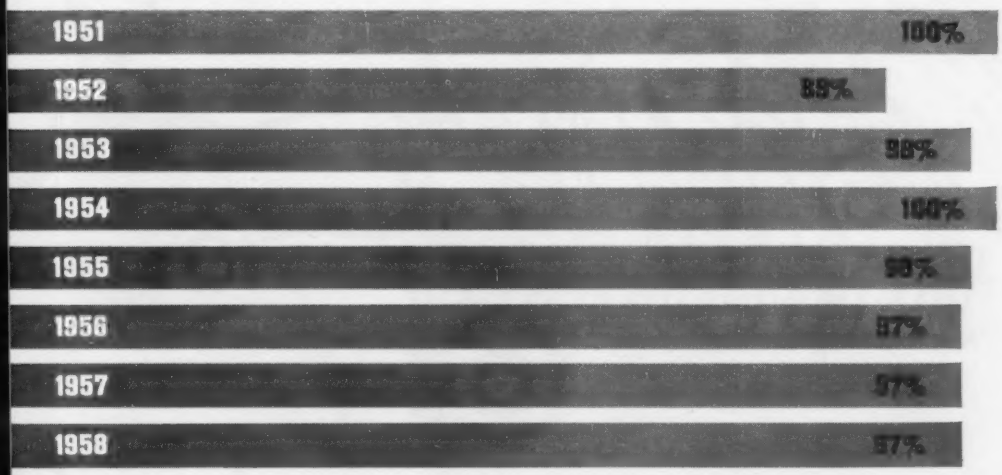
Fisher[3] observes: "The over-all average incidence of resistance, for the 31,779 strains [of staphylococci] through nine years was about 9%." Finland[4] reports that, while the proportion of strains resistant to several newer antibiotics has risen to between 10 and 30 per cent, such resistance to CHLOROMYCETIN "...has been rare even where this agent has been used extensively." Numerous other investigators concur in these findings.[5-8]

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Welch, H., in Welch, H., & Finland, M.: Antibiotic Therapy for Staphylococcal Diseases, New York, Medical Encyclopedia, Inc., 1959, p. 1. (2) Rebhan, A. W., & Edwards, H. E.: *Canad. M. A. J.* **82**:513, 1960. (3) Fisher, M. W.: *Arch. Int. Med.* **105**:413, 1960. (4) Finland, M., in Welch, H., & Finland, M.: Antibiotic Therapy for Staphylococcal Diseases, New York, Medical Encyclopedia, Inc., 1959, p. 187. (5) Bercovitz, Z. T.: *Geriatrics* **15**:164, 1960. (6) Glas, W. W., & Britt, E. M.: Management of Hospital Injections, in Symposium on Antibacterial Therapy, Michigan & Wayne County Acad. Gen. Pract., Detroit, September 12, 1959, p. 7. (7) Staphylococcal Infections in Pediatrics, Scientific Exhibit, Commission on Professional and Hospital Activities, 108th Ann. Meet., A. M. A., Atlantic City, June 8-12, 1959. (8) Robinson, H. M., Jr.; Robinson, R. C. V., & Raskin, J.: *Postgrad. Med.* **27**:522, 1960.

IN VITRO SENSITIVITY OF PYOGENIC STRAINS OF STAPHYLOCOCCI TO CHLOROMYCETIN OVER A PERIOD OF EIGHT YEARS*



Statistics were gathered over almost a decade on 329 children with staphylococcal pneumonia; 1,663 sensitivity tests were performed.

Adapted from Rebhan & Edwards.[3]

10660

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*From a clinical investigator's report to Merck Sharp & Dohme.

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Volume 59 Number 9
September, 1960

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Published monthly by the Michigan State Medical Society as its official journal at 2642 University Avenue, Saint Paul 14, Minnesota.

Second class postage paid at Saint Paul, Minnesota.

Yearly subscription rate, $6.00; single copies, 60 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year.

PRINTED IN U.S.A.

THE COVER

As the psychiatrist needs the support of the physician in other fields, the physician also needs the support of the psychiatrist. This month's cover symbolizes intelligent cooperation, benefiting mental health and all of medicine.

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W. A. Hyland, M.D., Grand Rapids	1961
J. S. DeTar, M.D., Milan	1961
C. I. Owen, M.D., Detroit	1961
O. J. Johnson, M.D., Bay City	1961

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	Term Expires
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*To fill unexpired term of R. W. Shook, M.D., deceased.

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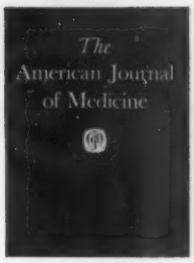

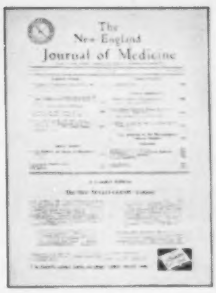

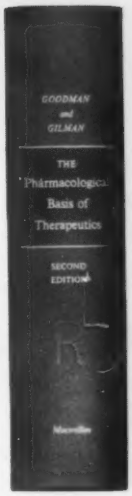

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references: 1. Wintrobe, M. M., *Clinical Hematology*, 3rd ed., Phila., Lea & Febiger, 1952, p. 398. 2. Goodman, L. S. and Gilman, A., *The Pharmacological Basis of Therapeutics*, 2nd. ed., New York, Macmillan, 1955, p. 1709. 3. New Eng. J.M., Vol. 259, No. 25, Dec. 18, 1958, p. 1231. 4. Frohlich, E. D., New Eng. J.M., 259:1221, 1958. 5. J.A.M.A., 169:41, 1959. 6. J.A.M.A., 173:240, 1960. 7. Goldsmith, G. A., American J. of M., 25:680, 1958. 8. Darby, W. J., American J. of M., 25:726, 1958.

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Vitamin A	25,000 USP units
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Thiamine mononitrate (B_1)	15 mg.
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Each green, capsule-shaped tablet contains Adabee plus nine essential minerals:

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indications: As dietary supplements for the deficiency states that accompany pregnancy and lactation, surgery, burns, trauma, alcohol ingestion, hyperthyroidism, infections, cardiac disease, polyuria, anorexia, cirrhosis, arthritis, colitis, diabetes mellitus, and degenerative diseases. Also in restricted diets, particularly peptic ulcer, in geriatrics, and in concurrent administration with diuretics and antibiotics.

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Kestler, O.: Conservative Management of "Low Back Syndrome", J.A.M.A. 172: 2039 (April 30) 1960.

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President's Page

"FIVE MORE TO GO"

Milton A. Darling

President

Michigan State Medical Society

Presidents of medical societies come and go, but the medical profession and its organization continue on and on.

In 1965, the Michigan State Medical Society will celebrate its 100th anniversary. Actually, there has existed an organization of doctors of medicine in Michigan for more than a hundred years, but the Michigan State Medical Society, as we know the organization today, will be 100 years old in just five more years.

Consequently, this year, working with President-Elect Kenneth Johnson of Lansing, we have taken cognizance of the necessity for a well-documented continuing and progressive medical society program plus the desirability of aiming that program toward an attainable goal that would culminate with the celebration of 100 years of service.

We believe we have such a program. It will be presented to the House of Delegates at its annual meeting this September in the form of a series of resolutions; a sort of "President's package" so to speak.

We are not so naive as to believe that at this time we can predict the course of the program even a few years in advance. Certainly, it will need to be reviewed annually and strengthened with new ideas and better means of implementing them.

But we do hope that by setting up some guide lines, and with some reasonable and interesting goals in view, we can make a good beginning in a program that will make grow, even brighter, the sun of medicine. I have been happy to be a part of this planning, just as I have enjoyed to the utmost the opportunity to serve as your President during the past year. I turn over the reins of this office in the full knowledge that my successor will serve you well as, together, we go forward to greater achievement.

Facts About Proposal No. 3 on the November Ballot

A Constitutional Amendment Relating to the Calling of a Constitutional Convention

ED NOTE: *The specific wording of this proposed constitutional amendment will be found at the end of this article* (Page 1314). *This presentation will attempt to delineate its major features and the most current arguments for and against the passage of this proposed Constitutional change.*

A proposal relating to the calling of a Constitutional Convention will be on the November ballot.

It will be listed as Proposal No. 3 of the constitutional amendments offered in this General Election. This proposal is designed to make several far-reaching changes in the procedure for calling and conducting a Con-Con (Constitutional Convention).

A primary feature of the proposal is a change in regard to the composition of any future Con-Con. Instead of three delegates from each of the 34 Senatorial Districts, as presently prescribed by the State Constitution (Making a total of 102 delegates), there would be one delegate from each State Senatorial District and one from each State Representative District (making a total of 144).

Rural people point out that this would make possible domination by metropolitan areas in any future Con-Con.

People from urban areas agree with this interpretation and point out that the number of people in a given area should determine that area's influence in a Constitutional Convention.

Another important change would reduce the vote required to call a Con-Con from a majority of those participating in an election to a majority of those voting on this particular issue.

Those opposing this amendment insist that a proposal as fundamental as holding a convention to change Michigan's Constitution should not be undertaken unless a majority of the voters participating in the election favor this idea. Proponents point out that many of those participating in the election do not vote upon Constitutional Amendments and that the will of the people will be better served if only a majority of those voting on the issue were required for its passage.

A third change embodied in the proposal would change the timetable for choosing delegates and holding a convention. The proposal would require that the delegates be nominated and elected within four months following a vote to hold a Con-Con. Consequently, if the proposal is adopted this November, the question of holding a Con-Con on the new basis would be placed on the April 1961 ballot. So if the Con-Con were voted on favorably next April, Michigan would hold its Con-Con in the fall of 1961.

Opponents of the proposal point out the direct cost of necessary special elections and the holding of a Con-Con would be considerably in excess of $2,000,000. Proponents argue that this is a small price to pay for revisions which, they believe, should be made at the earliest date.

It is interesting to note that during the 51 years that Michigan has had its present Constitution, the people have voted on 122 amend-

ments, approving 66 and rejecting 56.

Those opposing Proposal No. 3 on the November 8 ballot also tend to oppose the holding of a Con-Con altogether. They point out that for nearly 50 years, court decisions and interpretations have been accumulating and with a new Constitution these former procedures would be no longer applicable.

Those favoring the proposal believe that if it passes:

(a) A Constitutional Convention can be more easily called.
(b) The Constitutional Convention can remove such things as
    1. the 15-mill limitation on general property taxes.
    2. The sales tax distribution to schools and local units of government.
    3. The restricting of highway revenues for road repairs and construction.

Following the holding of a Constitutional Convention, the actions and recommendations of a convention must needs be submitted to the populace for adoption.

The holding of a Con-Con was voted on in 1958. At that time 62 per cent of those voting in the election voted on the Con-Con issue. The vote fell 15 per cent short of the necessary percentage needed to call a Constitutional Convention under the Constitution as presently in force.

PROPOSAL NO. 3—AMENDMENT TO THE CONSTITUTION

To Amend Section 4, Article XVII of the Constitution of the State of Michigan:

Sec. 4, Article XVII—"At the Biennial Spring Election to be held in the year 1961, in each sixteenth year thereafter and at such times as may be provided by law, the question of a General Revision of the Constitution shall be submitted to the Electors qualified to vote for members of the Legislature. In case a majority of the Electors voting on the question shall decide in favor of a Convention for such purpose, at an Election to be held not later than four months after the Proposal shall have been certified as approved, the Electors of each House of Representatives District as then organized shall Elect One Delegate for each State Representative to which the District is entitled and the Electors of each Senatorial District as then organized shall Elect One Delegate for each State Senator to which the District is entitled. The Delegate so elected shall convene at the Capital City on the First Tuesday in October next succeeding such Election, and shall continue their sessions until the business of the convention shall be completed. A majority of the delegates elected shall constitute a quorum for the transaction of business. The convention shall choose its own officers, determine the rules of its proceedings and judge of the qualifications, elections and returns of its members. In case of a vacancy by death, resignation or otherwise, of any delegate, such vacancy shall be filled by appointment by the governor of a qualified resident of the same district. The convention shall have power to appoint such officers, employes and assistants as it may deem necessary and to fix their compensation, and to provide for the printing and distribution of its documents, journals and proceedings. Each delegate shall receive for his services the sum of 1,000 dollars and the same mileage as shall then be payable to members of the legislature, but such compensation may be increased by law. No proposed constitution or amendment adopted by such convention shall be submitted to the electors for approval as hereinafter provided unless by the assent of a majority of all the delegates elected to the convention, the yeas and nays being entered on the journal. Any proposed constitution or amendments adopted by such convention shall be submitted to the qualified electors in the manner provided by such convention on the first Monday in April following the final adjournment of the convention; but, in case an interval of at least 90 days shall not intervene between such final adjournment and the date of such election, then it shall be submitted at the next general election. Upon the approval of such constitution or amendments by a majority of the qualified electors voting thereon such constitution or amendments shall take effect on the first day of January following the approval thereof.

Offer Course on Chest Diseases

A postgraduate course, Clinical Cardiopulmonary Physiology, will be offered by the Council on Postgraduate Medical Education of the American College of Chest Physicians at the Sheraton Towers Hotel, Chicago, October 24-28. For information, write to American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

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SUPPLIED: Bottles of 100 tablets, and combination packages of 30 with tablet inserter.

Each tablet contains: 1 mg. 9-aminoacridine undecylenate; 1 mg. N-myristyl-3-hydroxybutylamine hydrochloride; 1.8 mg. methylbenzethonium chloride; 12.5 mg. succinic acid; plus lactose and starch as excipients, in a rapidly disintegrating soluble vaginal tablet.

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HIGHLIGHTS of MSMS Council

Mid-summer Session of July 14-15, 1960

The following committee reports were presented: (1) Ninth Councilor District Medical Care Insurance Committee, meeting of May 11; (2) Maternal Health Committee, May 19; (3) Mental Health Committee, May 26; (4) Medical Care Insurance Committee, and its Relative Value Study Subcommittee, June 1; (5) Liaison Committee with Michigan Medical Schools, May 23; (6) Tuberculosis Control Committee, June 1; (7) Big Look Committee, June 5; (8) Committee to Study and Reappraise the Michigan Clinical Institute, meeting of June 9; (9) Michigan Clinical Institute Committee on Arrangements, meeting of July 7; (10) Arbitration Committee, meeting of April 8; (11) Wayne Councilor District Medical Care Insurance Committee, meeting of June 30; (12) Committee on National Defense, meeting of June 22; (13) Geriatrics Committee, meeting of June 28; (14) Vocational Rehabilitation Committee, meeting of June 30; (15) Committee on Awards, meeting of July 14; (16) Advisory Committee to the Executive Director, meeting of July 14; and (17) Big Look Committee, meeting of July 15.

In addition, the minutes of the June 30 meeting of the Michigan Cancer Coordinating Committee, to which MSMS sends representatives, was presented as information.

- Dates of Councilor Conferences in all eighteen Districts of the State were arranged. These meetings are being held, as in the past, prior to the Annual Session of the House of Delegates.
- Recommendations of the Insurance Commissioner, made at and after the two hearings on the Blue Shield rate increase request, were discussed; a special committee of The Council was appointed to delineate and coordinate a program to implement the Insurance Commissioner's recommended educational program.
- President-Elect K. H. Johnson, M.D., Lansing, presented a progress report on the new MSMS headquarters building.
- Speaker J. J. Lightbody, M.D., Detroit, offered various recommendations for improving presentation of material to Delegates and Alternate Delegates at the 1960 MSMS House of Delegates Session, including loose-leaf binders as well as identifying badges for Alternates.
- The 1961 County Secretaries-Public Relations Seminar is to be held in the new MSMS headquarters building in East Lansing; also the annual meeting of The Council will be held in East Lansing in January, 1961.
- Progress report on Michigan Medical Service was presented by President G. Thomas McKean, M.D., of Detroit.
- The reports of the three standing committees of The Council were presented by their chairmen: Oliver B. McGillicuddy, M.D., Lansing, for the Finance Committee; B. M. Harris, M.D., Ypsilanti, for the Publication Committee; Wm. M. LeFevre, M.D., Muskegon, for the County Societies Committee.
- Chairman McGillicuddy also projected estimated financial picture for 1961, as well as a financial recap covering the new MSMS headquarters building.
- President-Elect K. H. Johnson, M.D., referred to plans before Congress for social regimentation especially of the aged. He presented the following resolution, which was passed by The Council:

"WHEREAS, The Council of the MSMS is composed of physicians elected by democratic process to represent the practicing physicians of the component medical societies in each specific district, and

"WHEREAS, The Council of the MSMS received its direction from the House of Delegates of the MSMS—a body elected through democratic process to represent the practicing physicians of each county medical society and ultimately the practicing physicians of this state, and

"WHEREAS, The Council in its meeting of July 14-16, 1960, has taken cognizance of the rapidly growing advocacy for political control of the health needs of the people by those seeking public office; and having knowledge of the tendency on the part of the same to be unmindful of the disastrous results to the health care of the people and the deleterious impact on the quality of medical care; therefore be it

"RESOLVED: That The Council of the MSMS takes action this date to alert in every way possible the members of the profession in this state to these dangers; and be it further

"RESOLVED: That an all out effort be made to alert the citizens of this state to the dangers inherent in the political control of medicine by means of a program of public utterances, the written word, personal contact; and be it further

"RESOLVED: That every effort be made to present the positive reasons for the profession being allowed to proceed in the progressive manner already proven in the past and planned for the future; and be it further

"RESOLVED: That the action of The Council becomes a matter of public record, and that copies be sent to all leaders in the profession and that the implementation of this resolution go forward without delay."

(Continued on Page 1317)

Highlights of the MSMS Council

(Continued from Page 1316)

- The Council authorized the Legal Affairs Committee to inaugurate and carry on a general program of Public Relations in this crisis.
- JOURNAL allocations for the year 1961 were approved by The Council. In addition, The Council approved the recommendation of the Finance Committee to allocate from each member's dues 50 per cent of THE JOURNAL subscription fee ($3.00) in order to comply with postal regulations.
- The distribution list of the new MSMS publication "Medical Economic Currents" was presented and approved by The Council.
- The County Societies Committee's offer to cooperate with county medical societies in every way was approved by The Council.
- Progress report on the Beaumont Foundation was presented by Otto O. Beck, M.D., of Birmingham.
- Report of MSMS representatives to review University of Michigan Study of Medical-Hospital Economics was presented by H. F. Falls, M.D., Ann Arbor.
- Matters of mutual interest were presented by State Health Commissioner A. E. Heustis, M.D., of Lansing including (a) new members appointed to State Council of Health, (b) report on progress at nine (of the eleven) regional meetings of the the State Aging Commission, (c) the creation of a new division, on Hospital and Medical Facilities, in the Michigan Department of Health, (d) report on immunization, communicable disease, and on tuberculosis control.
- The Annual Report of The Council was reviewed and approved as amended, and was ordered presented to the House of Delegates.
- The annual meetings with distinguished guests, with the Michigan Hospital Association Board, the Michigan Health Council Board, and the Michigan Crippled Children Commission were held, and mutual problems and ambitions were discussed.
- The monthly report of the Public Relations Council included (a) filling Public Relations Field Secretary vacancy, (b) Annual Session Press Dinner scheduled for Detroit, September 21, (c) invitation to participate in Michigan State University Career Carnival, October 3-4, 1960, (d) report on literature distribution and on the status of the Public Relations' library, (e) report on the Mills Bill in the United States Congress, and (f) report on MAP.

MICHIGAN MEDICAL MEETINGS AND CLINIC DAYS

September 25-30	Michigan State Medical Society Annual Session	Detroit
September 27-29	Annual Meeting, Woman's Auxiliary to Michigan State Medical Society	Detroit
September 28-29	Annual Meeting, Medical Assistants to Michigan State Medical Society	Detroit
December 1-3	Western Surgical Association	Detroit
January 28-29, 1961	MSMS County Secretaries—Public Relations Seminar	East Lansing
March 8, 9, 10, 1961	Michigan Clinical Institute	Detroit

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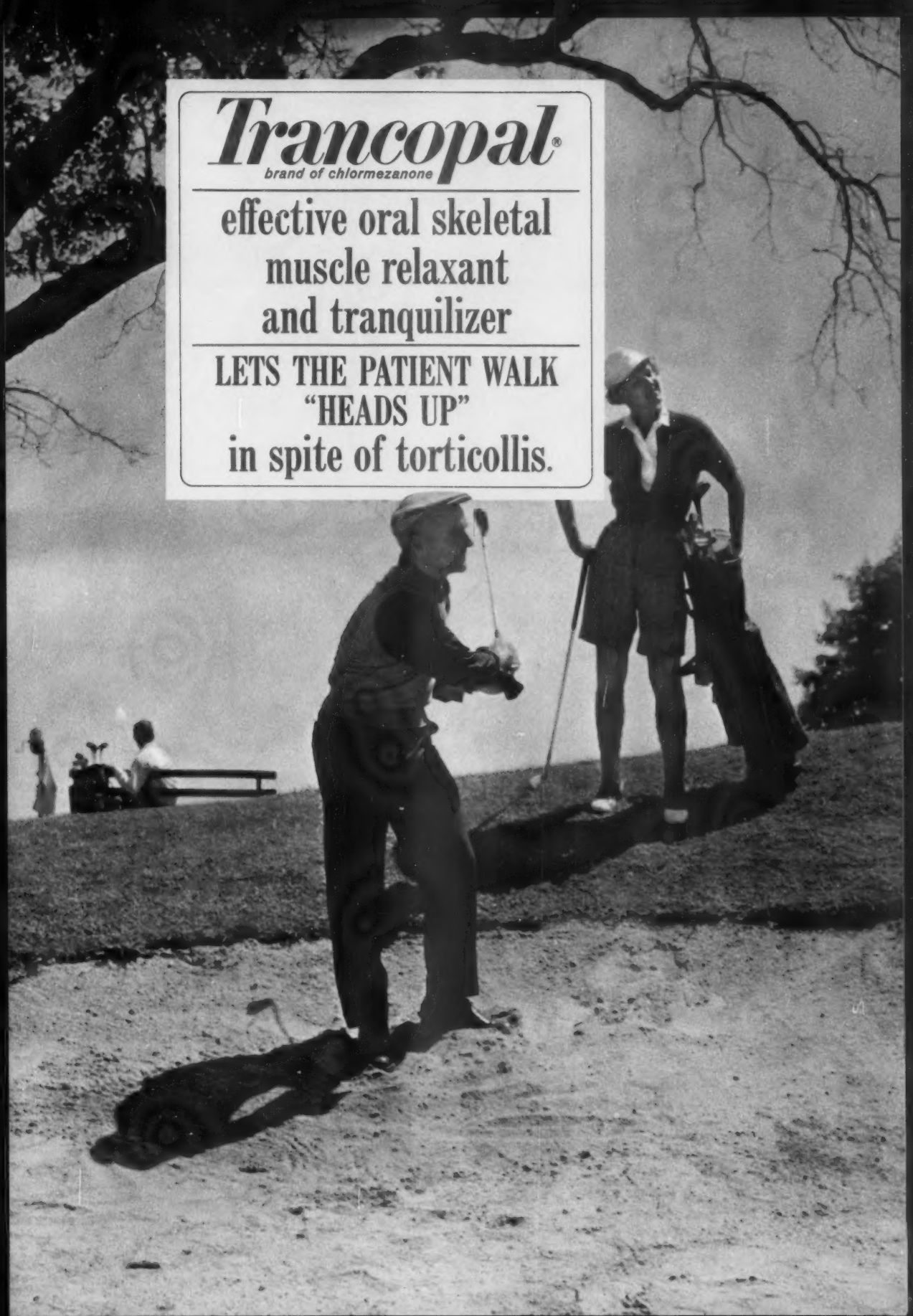
Trancopal®
brand of chlormezanone
effective oral skeletal
muscle relaxant
and tranquilizer
LETS THE PATIENT WALK
"HEADS UP"
in spite of torticollis.

Trancopal

relieves pain and spasm associated with torticollis.

In a recent study by Ganz, Trancopal brought considerable improvement or very effective relief to 20 of 29 patients with torticollis.[1] "The patients helped by the drug," states Ganz, "were able to carry the head in the normal position without pain." Similarly, Kearney found that in 8 of 13 patients with chronic torticollis treated with Trancopal improvement was excellent to good. ". . . Trancopal is the most effective oral skeletal muscle relaxant and mild tranquilizer currently available."[2]

Lichtman, in a study of patients with various musculoskeletal conditions, noted that 64 of 70 patients with torticollis obtained excellent to good relief with Trancopal.[3]

In a comparative study of four central nervous system relaxants, Lichtman reports that 26 of 40 patients found Trancopal to be the most effective drug.[3]

1. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 2. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 3. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958.

Clinical results with *Trancopal*®[2]

	Excellent	Good	Fair	Poor	Total
LOW BACK SYNDROMES					
Acute low back strain	25	19	8	6	58
Chronic low back strain	11	5	1	1	18
"Porters' syndrome"*	21	5	1	1	28
Pelvic fractures	2	1	—	—	3
NECK SYNDROMES					
Whiplash injuries	12	6	2	1	21
Torticollis, chronic	6	2	3	2	13
OTHER MUSCLE SPASM					
Spasm related to trauma	15	6	1	—	22
Rheumatoid arthritis	—	18	2	1	21
Bursitis	2	6	1	—	9
TENSION STATES	18	2	4	3	27
TOTALS	112 (51%)	70 (32%)	23 (10%)	15 (7%)	220 (100%)

*Over-reaching in lifting heavy bags resulting in sprain of upper, middle, and lower back muscles.

Dosage: **Adults, 200 or 100 mg. orally three or four times daily.**
Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

How Supplied: Trancopal Caplets®
200 mg. (green colored, scored), bottles of 100.
100 mg. (peach colored, scored), bottles of 100.

Winthrop LABORATORIES, New York 18, N. Y.

now–for more comprehensive control of *'pain & spasm'*

INDICATIONS

HEAD: temporomandibular muscle spasm • NECK: acute torticollis, osteoarthritis of cervical spine with spasm of cervical muscles, whiplash injury • TRUNK AND CHEST: costochondritis, intercostal myositis, xiphodynia • BACK: acute and chronic lumbar strains and sprains, acute low back pain (unspecified), acute lumbar arthritis and traumatic injury, compression fracture, herniated intervertebral disc, post-disc syndrome, strained muscle(s) • EXTREMITIES: acute hip injury with muscle spasm, ankle sprain, arthritis (as of foot or knee), blow to shin followed by muscle spasm, bursitis, spasm or strain of muscle or muscle group, old fracture with recurrent spasm, Pellegrini-Stieda disease, tenosynovitis with associated pain and spasm.

-pain due to
or associated with
-spasm of skeletal muscle

a new muscle relaxant-analgesic

Robaxisal®

ROBAXIN® WITH ASPIRIN

Many conditions, painful in themselves, often give rise to spasm of skeletal muscles. ROBAXISAL, the new dual-acting muscle relaxant-analgesic, treats both the pain and the spasm with marked success: In clinical studies on 311 patients, 12 investigators[1] reported satisfactory results in 86.5%. Each ROBAXISAL Tablet contains:

- A relaxant component—Robaxin®—widely recognized for its prompt, long-lasting relief of painful skeletal muscle spasm, with unusual freedom from undesired side effects . . . . . 400 mg.

  ®Methocarbamol Robins. U.S. Pat. No. 2770649.

- An analgesic component—aspirin—whose pain-relieving effect is markedly enhanced by Robaxin, and which has added value as an anti-inflammatory and anti-rheumatic agent . . . (5 gr.) 325 mg.

INDICATIONS: ROBAXISAL is indicated when analgesic as well as relaxant action is desired in the treatment of skeletal muscle spasm and severe concurrent pain. Typical conditions are disorders of the back, whiplash and other traumatic injuries, myositis, and pain and spasm associated with arthritis.

SUPPLY: ROBAXISAL Tablets (pink-and-white, laminated) in bottles of 100 and 500.

Also available: ROBAXIN Injectable, 1.0 Gm. in 10-cc. ampuls. ROBAXIN Tablets, 0.5 Gm. (white, scored) in bottles of 50 and 500.

[1]Clinical reports in files of A. H. Robins Co., Inc., from: J. Allen, Madison, Wisc.; B. Bilkey, New York, N. Y.; B. Decker, Richmond, Va.; C. Freeman, Jr., Augusta, Ga.; R. B. Gordon, New York, N. Y.; J. E. Holmblad, Schenectady, N. Y.; L. Levy, New York, N. Y.; M. LoBue, Chicago Heights, Ill.; H. Nachman, Richmond, Va.; A. Poindexter, Los Angeles, Calif.; E. Rogers, Brooklyn, N. Y.; R. H. Strong, Fairfield, Ia.

Additional information available upon request.

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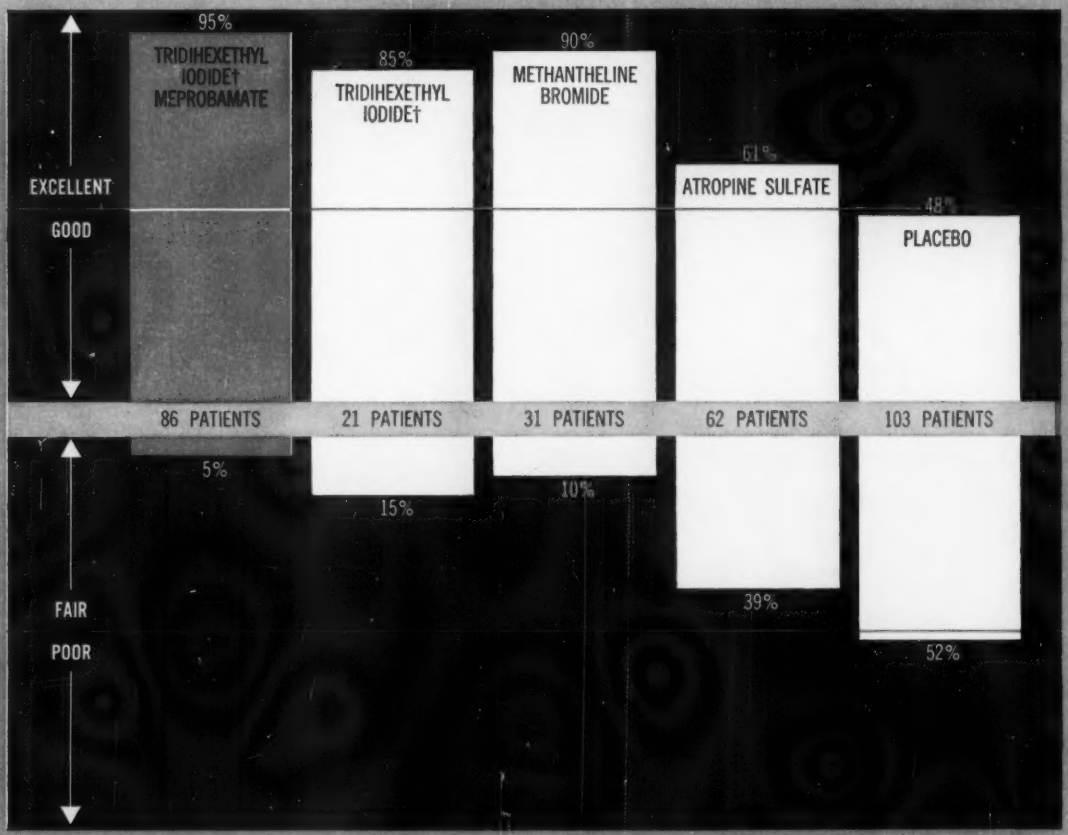
Making today's medicines with integrity . . . seeking tomorrow's with persistence

clinically proven efficacy..

in relieving tension . . . curbing hypermotility and excessive secretion in G. I. disorders



PATHIBAMATE combines two highly effective and well-tolerated therapeutic agents:

Meprobamate—widely accepted tranquilizer

and

PATHILON tridihexethyl chloride—anticholinergic noted for its effect on motility and gastrointestinal secretion with few unwanted side effects.

Contraindications: glaucoma, pyloric obstruction, and obstruction of the urinary bladder neck.

Two available dosage strengths permit adjusting therapy to the G.I. disorder and degree of associated tension.

Where a minimal meprobamate effect is preferred . . .

PATHIBAMATE-200 Tablets: 200 mg. of meprobamate; 25 mg. of PATHILON

Where a full meprobamate effect is preferred . . .

PATHIBAMATE-400 Tablets: 400 mg. of meprobamate; 25 mg. of PATHILON

Dosage: Average oral adult dose is 1 tablet t.i.d. at mealtime and 2 tablets at bedtime.

Pathibamate® 400 200

meprobamate with PATHILON® tridihexethyl chloride Lederle

.clinically proven safety

The efficacy of **PATHIBAMATE** has been confirmed clinically in **duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis** with gastrointestinal symptoms, and **gastric hypermotility.**

Pictured are the results obtained with the **PATHILON** (tridihexethyl iodide)–meprobamate combination† in a double-blind study of 303 ulcer patients, extending over a period of 36 months.* They clearly demonstrate the efficacy of **PATHIBAMATE** in controlling the symptoms.

SIDE EFFECTS	TRIDIHEXETHYL IODIDE† MEPROBAMATE	TRIDIHEXETHYL IODIDE†	METHANTHELINE BROMIDE	ATROPINE SULFATE	PLACEBO
DRY MOUTH	1%	5%	72%	46%	5%
STOMATITIS	1%	0%	28%	14%	0%
VISUAL DISTURBANCES	0%	0%	50%	34%	1%
URINARY RETENTION	0%	0%	18%	11%	1%
DROWSINESS	20%	0%	0%	0%	0%
COMPLICATIONS OR SURGERY					
HEMORRHAGE	0%	9%	3%	9%	10%
PERFORATION	0%	0%	0%	6%	0%
OPERATION	0%	5%	5%	14%	2%
RECURRENCES					
NONE	28%	23%	25%	17%	26%
FEWER AND MILDER	67%	62%	52%	37%	24%
SAME OR MORE	5%	15%	23%	46%	50%

*Atwater, J. S., and Carson, J. M.: Therapeutic Principles in Management of Peptic Ulcer. Am. J. Digest. Dis. 4:1055 (Dec.) 1959.

†PATHILON is now supplied as tridihexethyl chloride instead of the iodide, an advantage permitting wider use, since the latter could distort the results of certain thyroid function tests.

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Hydroflumethiazide • Reserpine • Protoveratrine A

An integrated multi-therapeutic antihypertensive, that combines in balanced proportions three clinically proven antihypertensives.

In each **SALUTENSIN** Tablet:

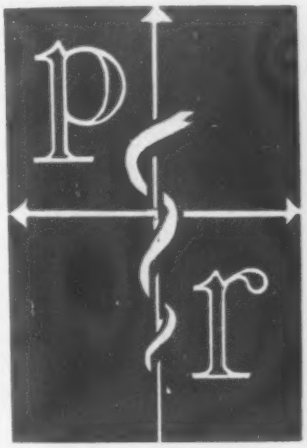
Saluron® (hydroflumethiazide)—a saluretic-antihypertensive	50 mg.
Reserpine—a tranquilizing drug with peripheral vasorelaxant effects	0.125 mg.
Protoveratrine A—a centrally mediated vasorelaxant	0.2 mg.

Comprehensive information on dosage and precautions in official package circular or available on request.

BRISTOL LABORATORIES • Syracuse, New York

University Survey Finds Aged Healthy and Well Cared For

Following are some statements excerpted from an address given by James W. Wiggins and Helmut Schoeck, of Emory University, Atlanta, Georgia, at the Fifth Congress of the International Association of Gerontology at San Francisco, August 11, 1960



This paper is a preliminary and partial report on a study of the non-institutionalized aging in the United States. The first objective of the study has been to describe accurately the "normal" aging population. It is commonly recognized that present knowledge of the aging in the United States is derived from studies of essentially "captive" aging persons, such as the hospitalized or the chronically dependent.

It is one thing for a physician or social worker to identify and treat the maladies of a patient or client, but it is a different thing for a social scientist to generalize from these unfortunates to a population group of some sixteen million. Such generalizations, often without intent, produce caricatures—distortions by exaggeration with grotesque effects.

Interviews were conducted with 1,492 persons sixty-five years of age or older.

Seen from our sample, the aging population of the United States enjoys a high level of health. Ninety per cent of all respondents said they were in either good or fair health. Two-thirds of our sample declared themselves in good health. Ten per cent said they were in poor health.

Two-thirds of our respondents had neither seen a doctor nor talked with one on the telephone, in regard to their health, during the four weeks preceding the interview.

When we asked the respondents: "Do you have any medical needs now that are not being taken care of?"—92 per cent said, "No."

This picture of a healthy and well-cared-for aging population in the United States is fully supported by the economic data on their medical care. Only 5 per cent of all respondents in our sample had spent over $100 for medical care for themselves or their spouses during the month preceding the interview.

When asked: "Suppose you had a large medical bill and had no medical insurance, how would you pay the bill?" Forty-two per cent of our respondents would use cash or a check to pay the bill, 11 per cent would mortgage their homes, and 15 per cent would use cash value of insurance or sell stocks and bonds. We should note that the question specifically inquired about the method of payment in *case there was no medical insurance.*

However, 64 per cent of our respondents did report insurance.

Our hypothesis was that modern life is not as complicated and frustrating for the aging as pictured in social science literature.

The data presented in this paper strongly support a re-examination of the conceptions of the aging in the United States. It may be seriously questioned whether increasing age is pathological *per se,* as is implied by the alarm with which it is viewed by many researchers, professional helpers, and policy makers.

The study shows that the aging, like others in our population are not characteristically dependent, inadequate, ill, or senile.

"Sometimes, when I have a running nose, I'd like to clear it with **TRIAMINIC®**— just to check out that systemic absorption business.

Reaches all nasal and paranasal membranes, huh?"

...and for humans with RUNNING NOSES...

You can't reach the entire nasal and paranasal mucosa by putting medication in a man's nostrils — any more than you could by trying to pour it down an elephant's trunk. TRIAMINIC, by contrast, reaches *all* respiratory membranes *systemically* to provide more effective, longer-lasting relief. And TRIAMINIC avoids topical medication hazards such as ciliary inhibition, rebound congestion, and "nose drop addiction."

Indications: nasal and paranasal congestion, sinusitis, postnasal drip, upper respiratory allergy.

Relief is prompt and prolonged because of this special timed-release action:

first—the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then—the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides:
½ the formulation of the Triaminic Tablet.
Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults—1 or 2 tsp.; *Children 6 to 12*—1 tsp.;
Children 1 to 6—½ tsp.; *Children under 1*—¼ tsp.

TRIAMINIC®

timed-release tablets, juvelets, and syrup

STOP *running noses* *and open stuffed noses orally*

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska

ATARAX ENCOMPASSES MORE PATIENT NEEDS...LETS YOU CHART A SAFER, MORE EFFECTIVE COURSE TO TRANQUILITY

ATARAX has a wide range of flexibility . . . from mild adult tensions and anxieties to full-blown alcoholic episodes . . . from the behavior disorders of childhood to the emotional problems of old age. Why? Because it gives you maximum adaptability of dosage . . . works quickly and predictably . . . is unsurpassed in safety.

ATARAX offers extra pharmacologic actions especially useful in certain troublesome conditions. It is antihistaminic and mildly antiarrhythmic, does not stimulate gastric secretions. Hence it is well suited to the needs of your allergic, cardiac and ulcer patients.

Have you discovered all the benefits of ATARAX?

Dosage: Adults, one 25 mg. tablet, or one tbsp. Syrup q.i.d. Children, 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d.

Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution: 25 mg./cc. in 10 cc. multiple-dose vials; 50 mg./cc. in 2 cc. ampules. Prescription only.

Complete bibliography available on request.

ATARAX®

(BRAND OF HYDROXYZINE)

PASSPORT TO TRANQUILITY

Rx Roerig

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being™

VITERRA® for vitamin-mineral supplementation
- capsules • tastitabs®
- therapeutic capsules

Each of the babies pictured on this page was borne by a mother with a *documented* previous history of true habitual abortion, who was treated with DELALUTIN during the pregnancy leading to this birth

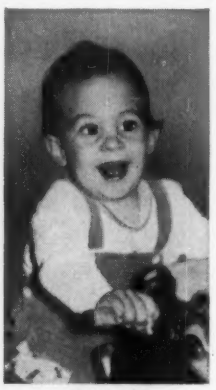
LIVING PROOF OF FETAL SALVAGE WITH DELALUTIN

SQUIBB HYDROXYPROGESTERONE CAPROATE

Improved Progestational Therapy

Garden City, N. Y.

Lincolnwood, Ill.



Skokie, Ill.

Denver, Colo.

Denver, Colo.

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Roselle, Ill.

Seaford, N. Y.

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DELALUTIN offers these advantages over other progestational agents

• long-acting sustained therapy • more effective in producing and maintaining a completely matured secretory endometrium • no androgenic effect • more concentrated solution requiring injection of less vehicle • unusually well-tolerated, even in large doses • fewer injections required • low viscosity makes administration easy

Complete information on administration and dosage is supplied in the package insert

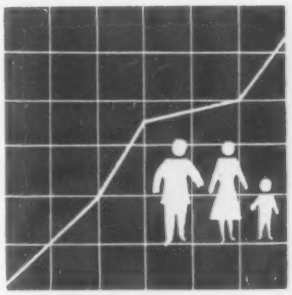
Supply:
Vials of 2 and 10 cc., each containing 125 mg. of hydroxyprogesterone caproate in benzyl benzoate and sesame oil.
Also available: DELALUTIN 2X in 5 cc. multiple-dose vials. Each cc. contains 250 mg. hydroxyprogesterone caproate in castor oil, preserved with benzyl alcohol.

SQUIBB *Squibb Quality—The Priceless Ingredient*

'DELALUTIN'® IS A SQUIBB TRADEMARK

Many Federal Employees In State in Blue Plan

SOCIO ECONOMICS 1335



Preliminary estimates show that well over half of Michigan's 40,000 federal employees picked National Blue Cross-Blue Shield health coverage under the new federal health-coverage act for federal workers.

The federal employees had a choice of three other programs: commercial coverage through Aetna Insurance Company, local group-practice plans where available, and various employee-organization plans.

But with well over half picking the National Blue Cross-Blue Shield plans, Michigan doctors will be getting a good percentage of patients with this special coverage, which differs in several respects from the regular Michigan Blue Cross-Blue Shield program.

These federal employees will have a special type Identification Card which is entitled "Blue Cross-Blue Shield Health Benefits Plan for Federal Employees."

This is a national program and the benefits and schedules of fees are different from Michigan Blue Shield plan—and so are the rules and regulations. Because of this—and the fact that the government insisted the program be "experience-rated," Michigan Blue Shield is not underwriting any of the program. *But it is servicing it*—processing the claims and paying the benefits according to the special schedule. (It is reimbursed in total for these.)

Michigan doctors will be able to use the regular Blue Shield Doctor's Service Report in reporting services rendered these federal employees. Payments will be in accordance with the indemnity benefits set forth in the schedule called "National Blue Shield Schedule of Allowances." This schedule was sent each doctor together with a copy of the official brochures giving the benefits of this government-wide program.

Health Insurance Growth Reported in Michigan

The number of persons in Michigan with health insurance reached a new high of 6,357,000 at the end of 1959.

The Health Insurance Institute, New York City, reports its 14th annual survey of health insurance coverage in the U. S. revealed that nearly 128 million Americans were covered. This represents 72 per cent of the total civilian population. The survey is based on reports from insurance companies, Blue Cross-Blue Shield and other health care plans.

The number of persons in Michigan with hospital expense insurance increased by 27,000 during 1959 to reach the 6,357,000 total. The number of persons protected by regular medical expense insurance, which helps pay for doctor visits for non-surgical care, increased from 4,528,000 to 4,905,000.

Length of Hospital Stay Increases from All-Time Low

The average length of time patients stayed in short-term general hospitals in the United States jumped last year for the first time since World War II, the American Hospital Association has reported.

The length of stay in short-term general hospitals rose to 7.8 days in 1959 after an all-time low of 7.6 in 1958. The average length of stay had consistently declined since 1946 when it was 9.1 days.

At the same time, the number of admissions to all hospitals dropped, while the average number of persons hospitalized each day increased. The increased length of stay may have accounted for this discrepancy.

The average number of patients in all hospitals each day in 1959 was 1,363,217, compared with 1,322,938 in 1958. Admissions to all hospitals last year totaled 23,605,186, nearly 92,000 less than the record 23,697,157 in 1958, according to statistics which appeared in the August number of *The Journal of the American Hospital Association.*

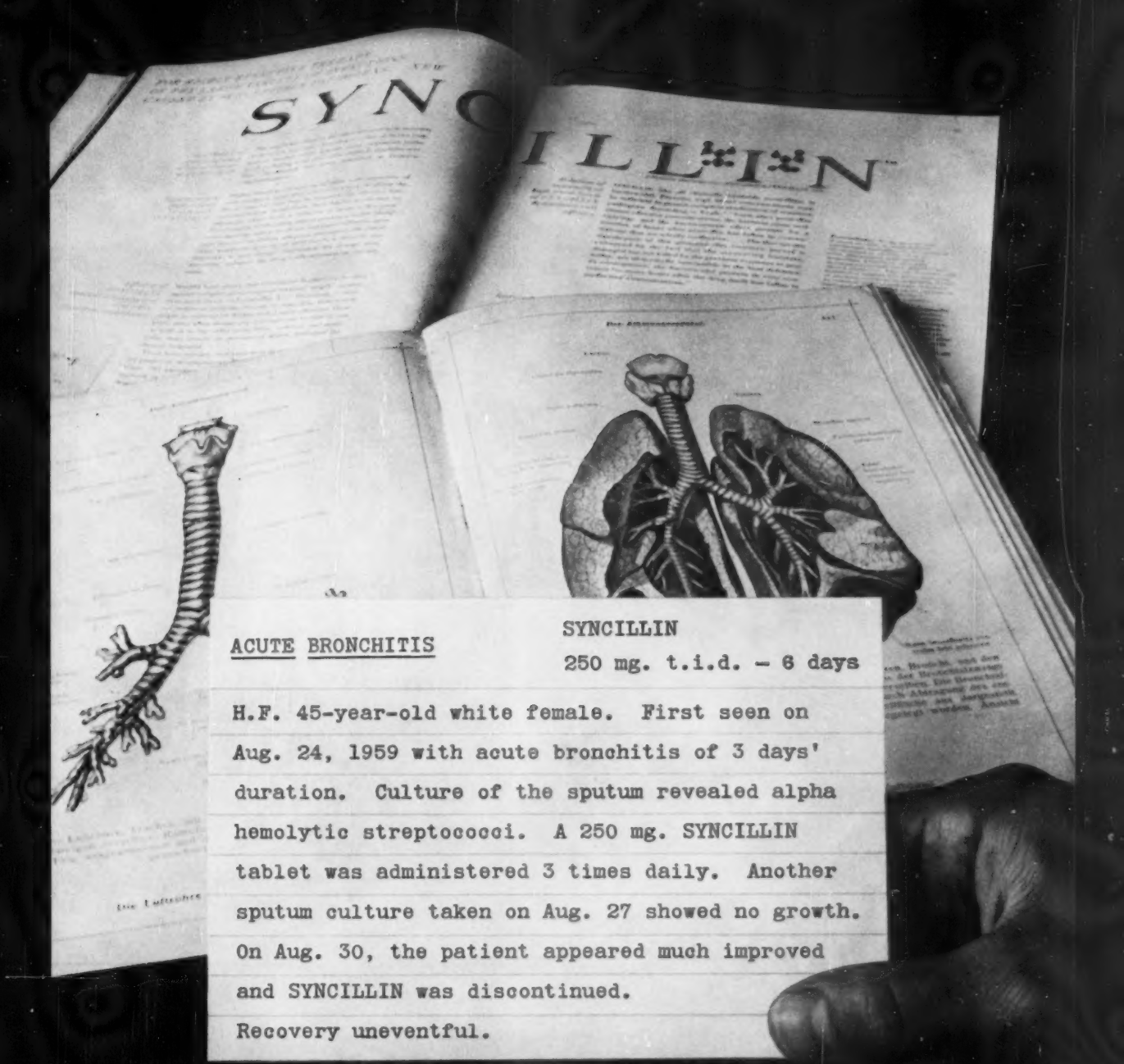
New Booklet Reports Costs Of Nursing Home Facilities

A new federal government booklet cites costs from 36 studies in nursing homes, homes for the aged, boarding homes under proprietary, non-profit, and public auspices. The booklet, "Costs of Operating Nursing Homes and Related Facilities," is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for 20 cents.

A summary table highlighting the general range in costs among the different facilities shows that daily costs since 1957 vary from $3.38 in four Georgia nursing homes (having 100 beds and over) to $13.85 in a 42-bed nursing home unit of a New Jersey hospital providing rehabilitation and occupational therapy.

Costs of Keeping Up

A recent study by a professional management firm gives some new figures on the amount of money spent by doctors of medicine to keep up with new medical developments. The study shows that the average outlay by fields of practice range from $524 annually by pediatricians to $1,850 annually by plastic surgeons.



ACUTE BRONCHITIS

SYNCILLIN
250 mg. t.i.d. – 6 days

H.F. 45-year-old white female. First seen on Aug. 24, 1959 with acute bronchitis of 3 days' duration. Culture of the sputum revealed alpha hemolytic streptococci. A 250 mg. SYNCILLIN tablet was administered 3 times daily. Another sputum culture taken on Aug. 27 showed no growth. On Aug. 30, the patient appeared much improved and SYNCILLIN was discontinued. Recovery uneventful.

Actual case summary from the files of Bristol Laboratories' Medical Department

THE ORIGINAL potassium phenethicillin

SYNCILLIN®

(Potassium Penicillin-152)

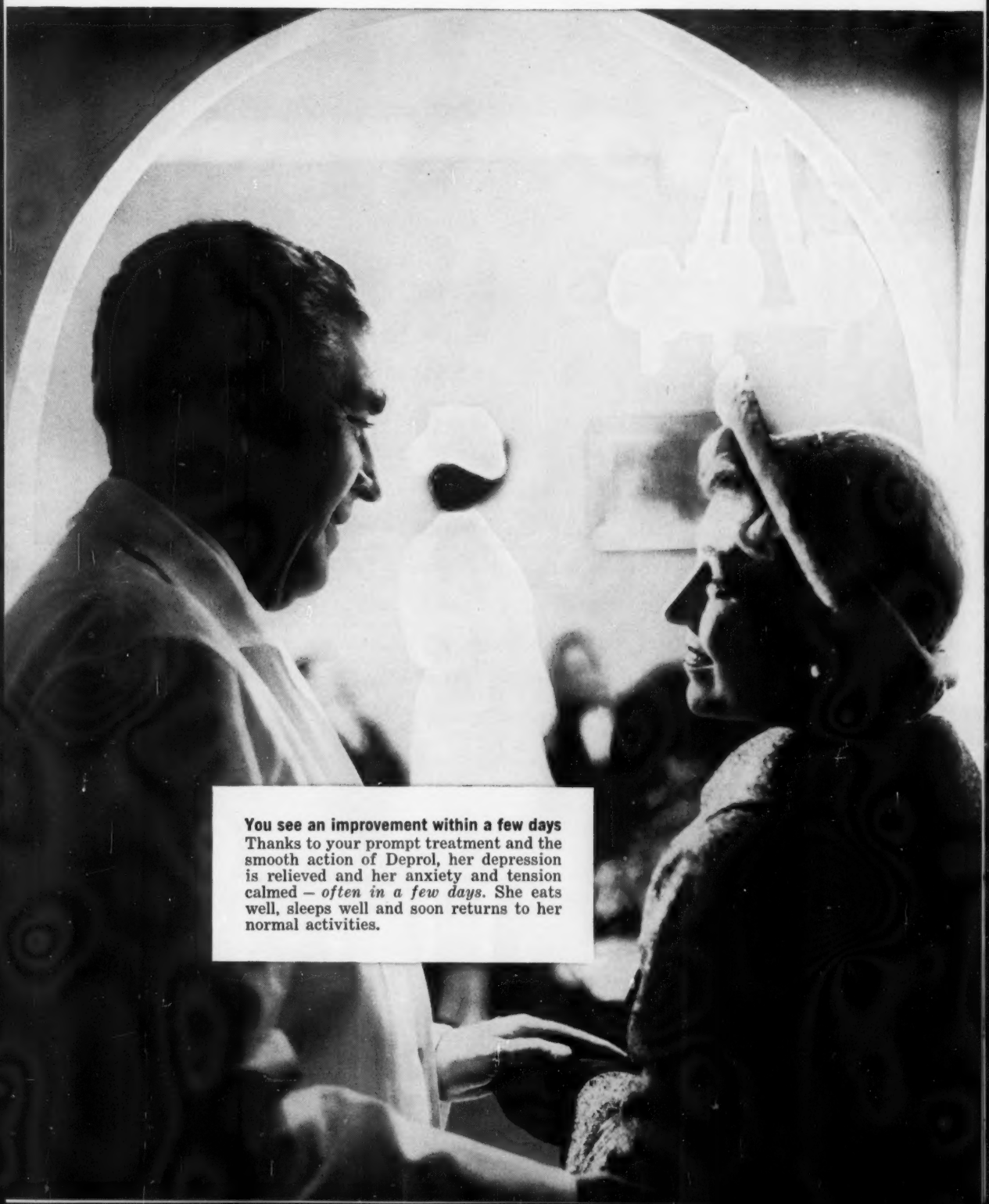
A dosage form to meet the individual requirements of patients of all ages in home, office, clinic, and hospital:

Syncillin Tablets – 250 mg. (400,000 units) ... Syncillin Tablets – 125 mg. (200,000 units)
Syncillin for Oral Solution – 60 ml. bottles – when reconstituted, 125 mg. (200,000 units) per 5 ml.
Syncillin Pediatric Drops – 1.5 Gm. bottles. Calibrated dropper delivers 125 mg. (200,000 units)

Complete information on indications, dosage and precautions is included in the circular accompanying each package.

BRISTOL LABORATORIES, SYRACUSE, NEW YORK

Lifts depression...



You see an improvement within a few days
Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety... rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient *–they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation–*they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety–both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function–frequently reported with other antidepressant drugs.

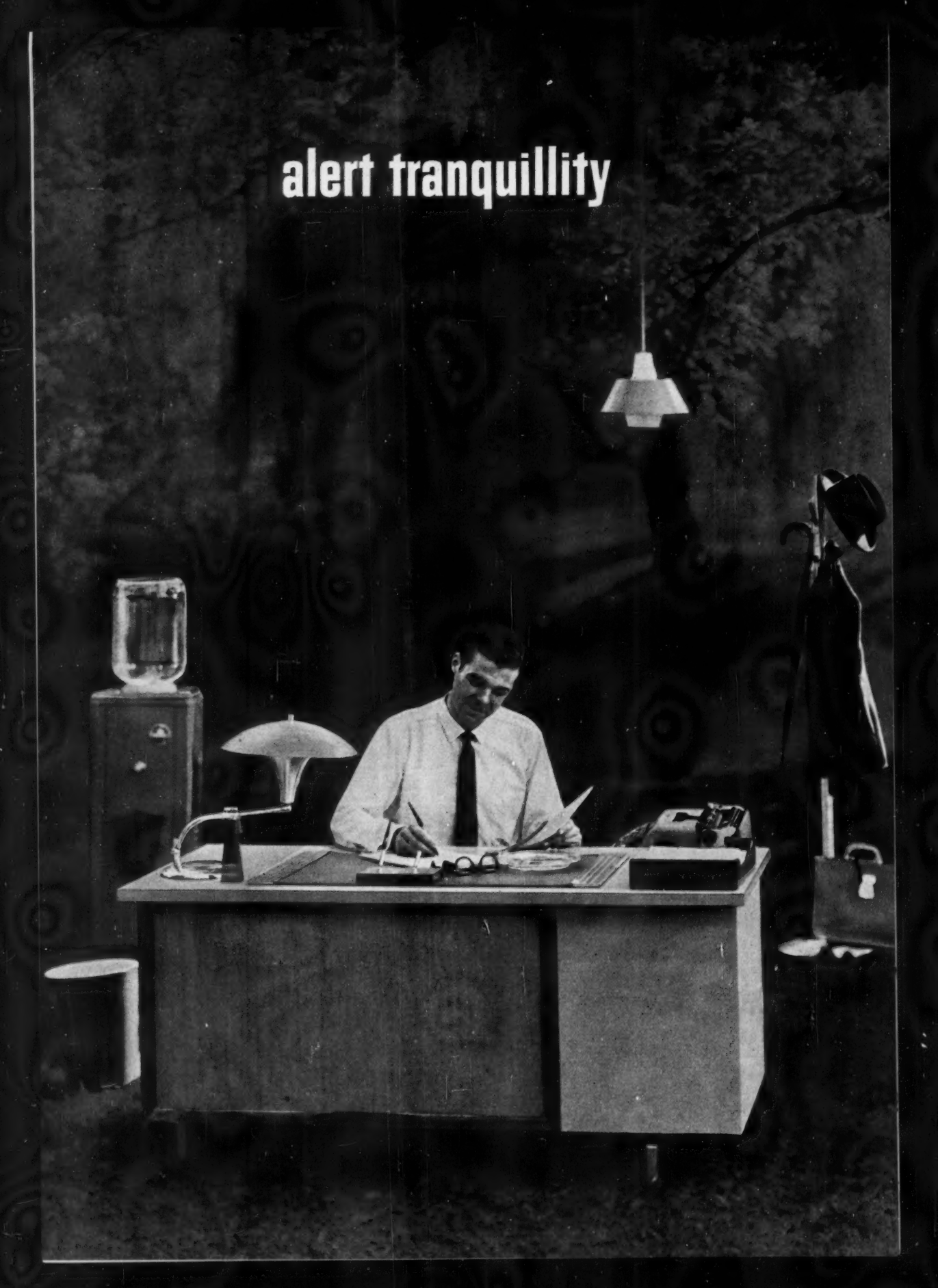
Bibliography *(13 clinical studies, 858 patients)*: **1.** Alexander, L. (35 patients): Chemotherapy of depression – Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. **3.** Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. **4.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **5.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **6.** Gordon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. **7.** Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. **8.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression – New techniques and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **9.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **10.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **11.** Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **12.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. **13.** Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.

Deprol®

WALLACE LABORATORIES / *Cranbury, N. J.*


alert tranquillity

a new, improved, more potent relaxant for anxiety and tension

- effective in half the dosage required with meprobamate
- much less drowsiness than with meprobamate, phenothiazines, or the psychosedatives
- does not impair intellect, skilled performance, or normal behavior
- neither depression nor significant toxicity has been reported

alert tranquillity

Striatran®

EMYLCAMATE

- a familiar spectrum of antianxiety and muscle-relaxant activity
- no new or unusual effects—such as ataxia or excessive weight gain
- may be used in full therapeutic dosage even in geriatric or debilitated patients
- no cumulative effect
- simple, uncomplicated dosage, providing a wide margin of safety for office use

STRIATRAN is indicated in anxiety and tension, occurring alone or in association with a variety of clinical conditions.

Adult Dosage: One tablet three times daily, preferably just before meals. In insomnia due to emotional tension, an additional tablet at bedtime usually affords sufficient relaxation to permit natural sleep.

Supply: 200 mg. tablets, coated pink, bottles of 100.

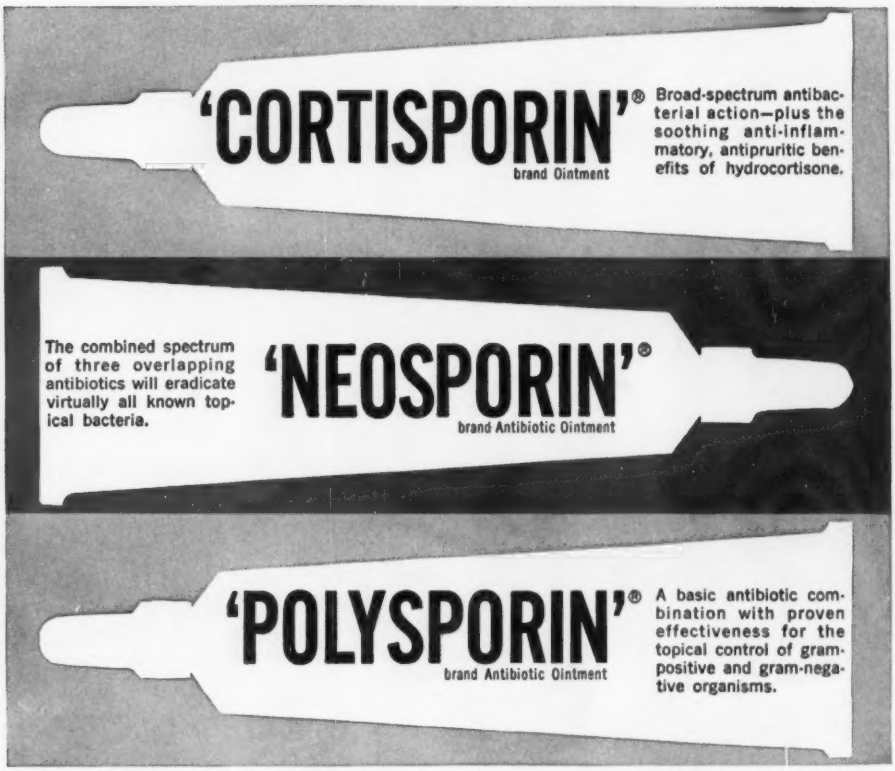
While no absolute contraindications have been found for Striatran in full recommended dosage, the usual precautions and observations for new drugs are advised.

For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.

MSD MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

STRIATRAN IS A TRADEMARK OF MERCK & CO., INC.

'B. W. & Co.' 'Sporin' Ointments rarely sensitize . . . give decisive bactericidal action for most every topical indication



Contents per Gm.	'Polysporin'®	'Neosporin'®	'Cortisporin'®
'Aerosporin'® brand Polymyxin B Sulfate	10,000 Units	5,000 Units	5,000 Units
Zinc Bacitracin	500 Units	400 Units	400 Units
Neomycin Sulfate	—	5 mg.	5 mg.
Hydrocortisone	—	—	10 mg.
Supplied:	Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip)	Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip)	Tubes of ½ oz. and ⅛ oz. (with ophthalmic tip)

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

Just one prescription for Engran Term-Pak
SQUIBB VITAMIN-MINERAL SUPPLEMENT *(270 tablets)*
calling for just one tablet per day will carry her through term to the six-week postpartum check-up. Thus, you help to assure a nutritionally perfect pregnancy, while providing the convenience and economy of the re-usable Term-Pak. Engran is also available in bottles of 100 tablets.

SQUIBB *Squibb Quality—The Priceless Ingredient*

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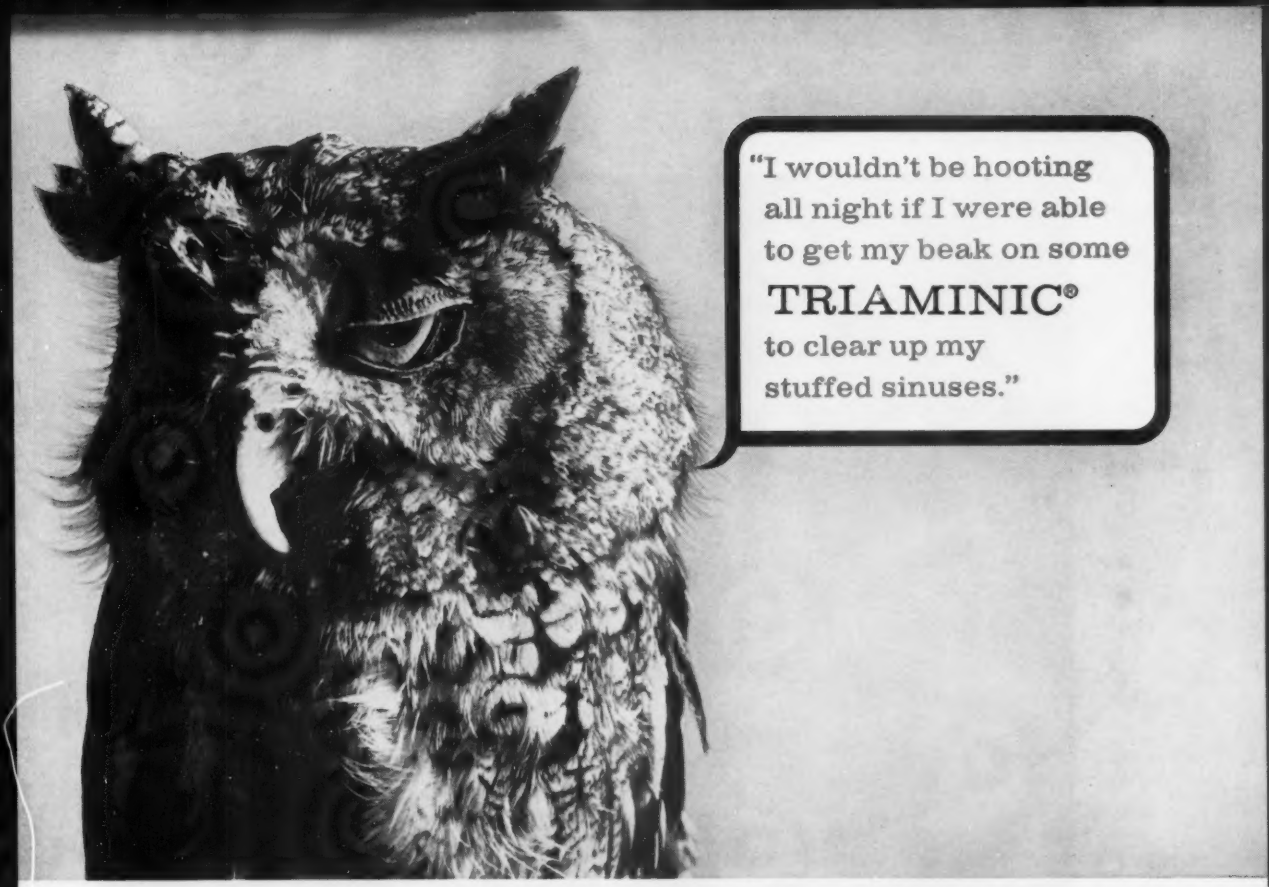
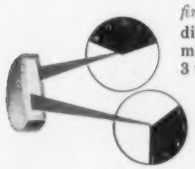


...and for humans with STUFFED-UP SINUSES...

Your patient with sinus congestion doesn't give a hoot about anything but prompt relief. And TRIAMINIC has a pharmacologically balanced formula designed to give him just that. As soon as he swallows the tablet, the medication is transported *systemically* to *all* nasal and paranasal membranes – reaching inaccessible sinus cavities where drops and sprays can never penetrate. TRIAMINIC thereby brings more complete, more effective relief without hazards of topical therapy, such as ciliary inhibition, rebound congestion, and "nose drop addiction."

Indications: nasal and paranasal congestion, sinusitis, postnasal drip, upper respiratory allergy.

Relief is prompt and prolonged because of this special timed-release action:



first – the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then – the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides:
½ the formulation of the Triaminic Tablet.
Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults – 1 or 2 tsp.; *Children 6 to 12* – 1 tsp.;
Children 1 to 6 – ½ tsp.; *Children under 1* – ¼ tsp.

TRIAMINIC®

timed-release tablets, juvelets, and syrup

STOP *running noses* *and open stuffed noses orally*

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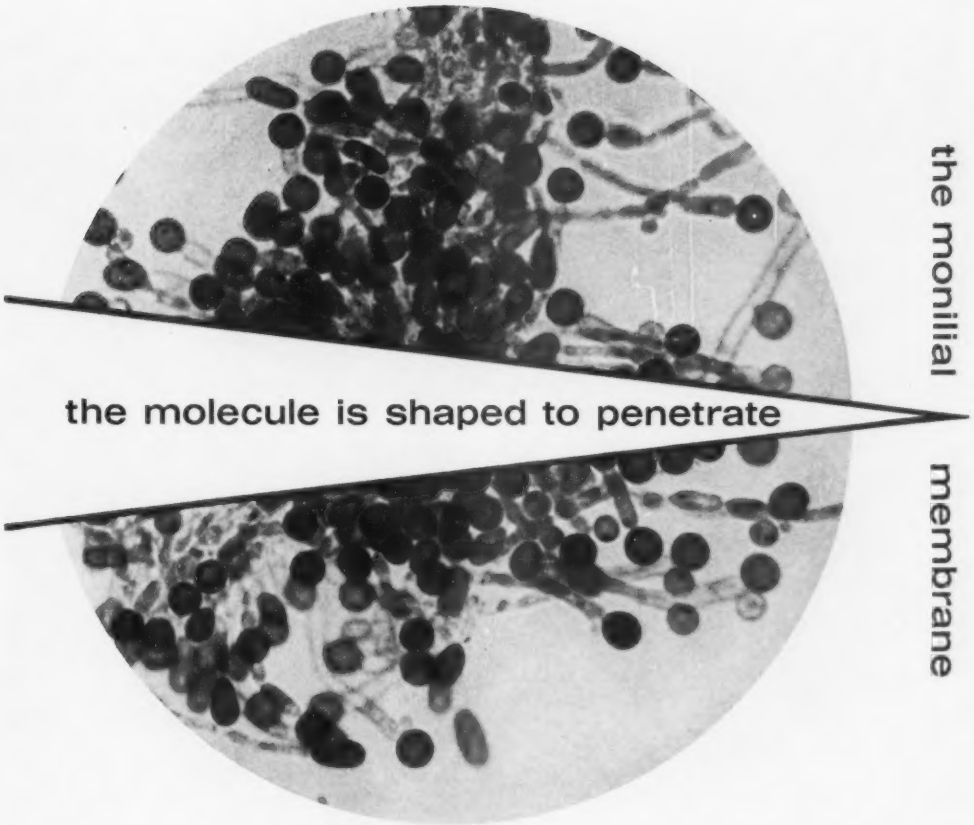

a new potent, non-staining, antifungal agent

FOR MONILIASIS

SPOROSTACIN® TRADEMARK Chlordantoin Cream

soothing, odorless, white, vaginal fungicide

- Exceptional fungicidal activity
- Enthusiastic patient acceptance
- Outstanding clinical results

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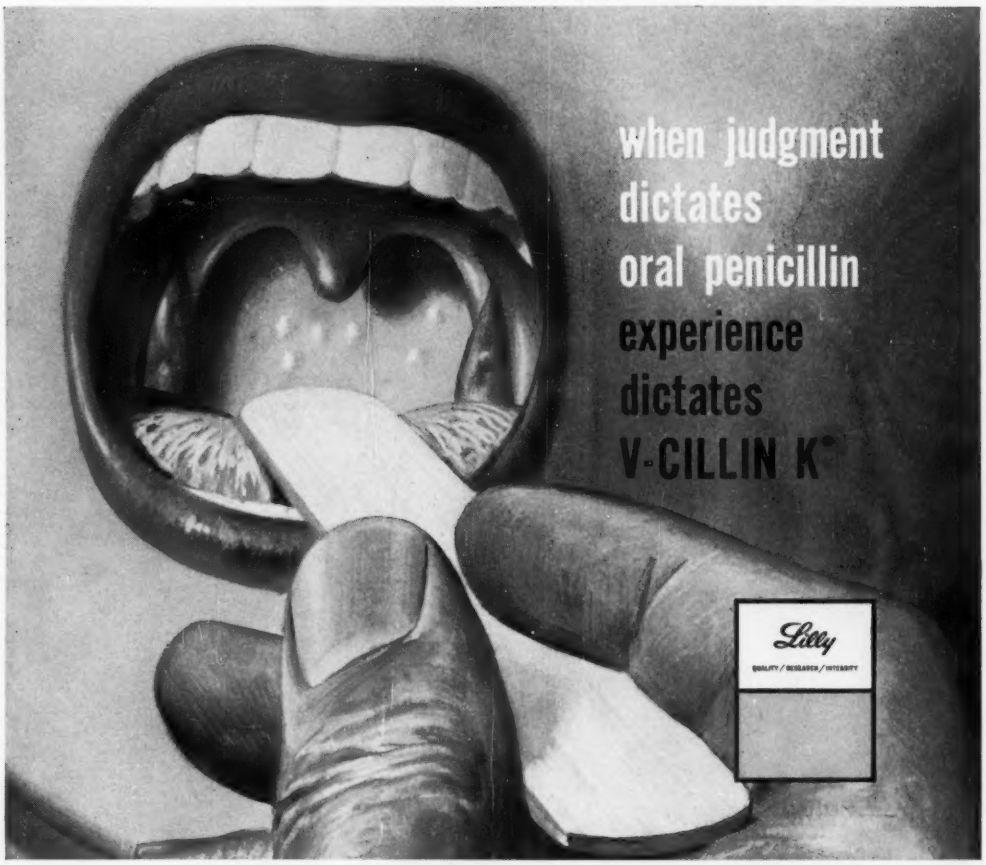
Lapan, B.: Am. J. Obst. & Gynec. 78:1320, 1959.



for maximum effectiveness Recently, Griffith[1] reported that V-Cillin K produces antibacterial activity in the serum against penicillin-sensitive pathogens which is unsurpassed by any other form of oral penicillin. This helps explain why physicians have consistently found that V-Cillin K gives a dependable clinical response.

for unmatched speed Peak levels of antibacterial activity are attained within fifteen to thirty minutes—faster than with any other oral penicillin.[1]

for unsurpassed safety The excellent safety record of V-Cillin K is well established. There is no evidence available to show that any form of penicillin is less allergenic or less toxic than V-Cillin K.

Prescribe V-Cillin K in scored tablets of 125 and 250 mg., or V-Cillin K, Pediatric, in 40 and 80-cc. bottles.

1. Griffith, R. S.: Comparison of Antibiotic Activity in Sera Following the Administration of Three Different Penicillins, Antibiotic Med. & Clin. Therapy, 7:No. 2 (February), 1960.

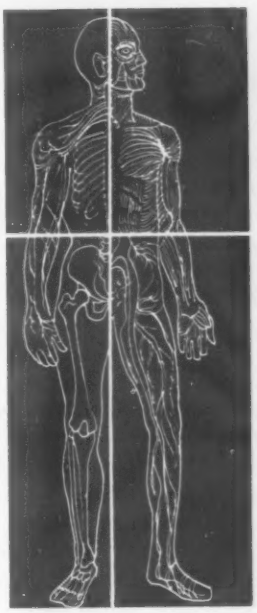
V-CILLIN K® (penicillin V potassium, Lilly)

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

033001

Preparation of the Patient for Medical and Surgical Procedures

O. Spurgeon English, M.D.
Philadelphia, Pennsylvania



PATIENTS and potential patients look upon hospitals in many different ways. They think of them as havens of security—places where lives are saved and health restored, and as places of rest and quiet. On the other hand, they think of them with much anxiety and concern. Probably one or more of the following questions occupy a large part of the patient's thinking when he is about to undergo diagnosis, treatment or surgery.

He wonders: (1) What will be done to me? (2) Will it bring pain and discomfort? (3) Will the people who take care of me be kind to me? (4) How long will I have to stay? (5) Will I emerge multilated or disfigured? (6) Will I be told the truth? (7) What will it cost? Can I afford it? (8) Will it frighten me to death?

In spite of ever-growing knowledge in the detection and cure of illness, medicine has long been criticized. Much of the criticism has been focused on the cost of medical care, and while there is some justification for this, it seems safe to assume that many frustrations, disappointments, and anxieties have been hidden under this guise. Doubtless, it is also true that people simply expect more and better treatment on all sides. People have wanted to travel more comfortably, sleep more comfortably, eat more comfortably and luxuriously, and work more comfortably; these wishes appear always to be met. So, too, they want to have less inconvenience and discomfort from illness and they expect members of the medical profession to provide this.

In preparing the patient psychologically for what lies ahead, there seems little question about the need for telling him the truth, and telling it with as much clarity as possible in regard to all the questions listed. But more than telling the truth clearly is involved. There is also the matter of helping the patient discuss and digest the truth. This puts a psychologic and emotional strain upon both patient and physician, but is a strain that should be faced and borne by both at the appropriate time. For only frustration, tension, and ill will can occur on both sides if this philosophy is not adhered to. In other words, postponement or actual evasion of this principle gives no gain and does not contribute to the well-being of either physician or patient. However, having just made this sweeping general statement, I must now admit that there are a few exceptions to it. All patients do not want the truth about everything, and it can be debated whether in some cases it would be better not to tell the whole truth.

There are many patients who feel that if they are going to die they do not want to know; if they have cancer they should not be told. A few would certainly say they do not want to know if they have heart disease and some would say, "If there is a strong risk that I will not survive this operation do not tell me of it."

Why is this so? Because these possibilities introduce more morbid fantasies than the mind of the patient can deal with and still maintain any healthy sense of well-being.

May I say at this point that it is my impression that the number of people who can face and deal emotionally with the reality of serious illness and death has increased. I believe that it will continue to increase in number, but it is impossible for me to imagine a time in the future when all people can face death with equanimity.

There has been a change in the thinking among physicians over the years which has advocated more frankness and more forthright dealing with the facts of illness when confronting the patient. It was found that an enlightened patient was a more co-operative patient. As a result, the outcome of study and treatment was more satisfactory when the patient knew and understood the nature of his illness and what was required of him to achieve and maintain health. It was also found that knowledge on the part of the patient about his illness did not detract from his respect for his physician nor from the intelligent use of his physician's services. On the contrary, his respect and utilization of his physician increased. In fact, the physician has found that frankness about ignorance of a certain disease has not lowered his prestige either individually or collectively, and the public's support of research activities in these unknown areas is ample proof of this.

Why then is there still so much criticism of the physician by the public for lack of information, lack of explanation, needless worry, disappointment in results expressed by the statements:

- These doctors never tell you anything.
- My doctor has me worried sick for days.
- Why won't a doctor tell you the truth?
- I wish these doctors would make up their minds about what is the matter with me.
- I always worry so much about what is going to happen.
- I wish I knew what they are going to do to me.
- They kept me so long in the hospital without telling me anything.
- If the surgeon had told me what it was going to be like after the operation, I could have taken it better.

Possibly many physicians have the impression that they talk things over with their patients, but this list of complaints could be made much longer. One hears these complaints constantly so it must be that physicians are not adequately preparing patients for what happens in medical study, treatment, or surgical work. For instance, it may be that the physician does not want to take the time to explain, or he has not practiced the art of simple and clear explanation. He may not want to share the knowledge he feels gives him a position of advantage over his patient, or he may fear the patient will become too emotional in some way and become dependent and frightened and cry, protest, argue, refuse to co-operate, or beseech the physician to alter his intended procedure. In short, when the physician keeps the information to himself and the patient remains in ignorance, he may be easier to handle. Finally, the physician may fear the patient will ask questions he cannot answer, and the lack of knowledge revealed will cause the patient to lose respect and leave him.

Hence we see that there are emotional problems in both the patient and physician and any effort to bring about closer relations between them necessitates not only a clear understanding of the problems on both sides, but an honest effort to overcome them. Since the doctor is cast in the role of leader and teacher, it is he who will, in most instances, have to show what is meant.

Illustrative Cases

Case 1 (Costs).—A fifty-three-year-old business man suffered from abdominal symptoms. After a few days in the hospital, and following consultation with a surgeon, he was informed that he needed an abdominal operation. The surgeon was a man with whom he was already acquainted and when the decision for surgery was announced to him, the patient asked the surgeon what his charge would be. The surgeon waved his hand in a manner that was intended to

THE AUTHOR

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Read at the 93rd Annual Session of the Michigan State Medical Society, Detroit, September 30-October 3, 1958.

ward off discussion of this problem and said, "Oh let's not worry about that. You are here to get well and we don't have to discuss that now." The patient persisted, however, and said, "But I do want to discuss it now. My business has not been good and I'm going to lose more time from it through this illness and operation. I am the kind that worries about my bills, and I don't want to have to go through this operation wondering what your bill will be and how it will affect my financial planning for the next six months. I want you and I want your skill and care, but I guess in the final analysis if I can't afford you, I will try to get someone I can afford."

The surgeon tried again to tell the patient he was making too big a thing of this and that he was sure the patient could afford his services. But the patient would not be put off. He said, "Look, we have known each other for years and we want to retain our good relations. There is no reason why an experienced man like you can't tell me what your charge will be for this operation. I don't want to be embarrassed or angry over a fee I can't afford and I feel sure you don't want to have me dissatisfied. Just sit down here and think a minute and tell me your fee and I'll have peace of mind in knowing at least one of the problems that lies ahead of me—a financial one." The surgeon named a fee of $450.00 and the patient was satisfied. It may be of interest to relate that the surgeon joked and twitted the patient for some time afterward because of this insistence in having the fee stated before the operation.

Few patients will be as insistent as this man was, but it is certain that many of them will have concern for the surgeon's fee if they do not know what it is before the operation.

Why would a surgeon be reluctant to name his fee for operation?

First, he may feel it is crass and indelicate to talk about a fee for his work when he is dealing with health and saving a life. He may think it makes his work commercial when he would like to think of it on a higher plane. But he certainly does plan to charge a fee and he will decide the fee when certain things become clearer in his mind. If the operation goes well, convalescence is fast and uneventful and the patient is satisfied, he will feel comfortable in naming his fee. If, on the other hand, the case becomes complicated and prolonged and takes more time than he thought, he may want to take this into account. And perhaps he should. Also, a physician or surgeon may feel that if the time of setting fees is delayed until later in the contact with the patient, the latter's financial condition will be better known and the need for consideration to the patient will become clearer. This is in line with a practice that has always prevailed in medicine and still prevails—a physician has his regular fee, a fee for those who need special consideration and reduction, and a fee for the occasional patient who wants and expects to pay a little more for his physician's services. However, it should be borne in mind that patients have their problems about fees and these problems are often of no small moment.

A suggestion for the surgeon might be that he say, "If you wish to know my charges, my secretary or I will tell you beforehand. But if you wish to leave it to the termination of my care of you, that is agreeable to me also." This gives the patient and surgeon an opportunity to deal with the subject and make each other comfortable about it. Cost is important among those things that enter into the working interaction of doctor and patient.

I find myself a little guilty in having chosen money as one of the first subjects to discuss in talking about the preparation of the patient for medical and surgical procedures. But I set out to describe the things which frighten, worry, or harass the patient in relation to his medical care, so the order seems unimportant. Moreover, all the things which disturb the patient are serious, human, and difficult to talk about.

Case 2 (Examination).—One evening I went down the elevator of a building and the elevator operator was crying. Knowing her quite well, I inquired as to why she was crying. She told me that she was to have a bronchoscopic examination the following day. I tried to be reassuring and said that, while it was true that the position was a little uncomfortable, sedation was given and I had never heard anyone dwell particularly on the pain of the procedure. To this she replied, "I'm not afraid of the pain or discomfort. I could stand lots of that. My fear is very different. I'm afraid that when I get there I'll break down, go to pieces, and act like a child, instead of a thirty-five-year-old woman. The idea has me terrified beyond measure."

All I had time to say was that grown-ups must not have been very patient with her as a child, when she was afraid of dental or medical procedures. But her remarks did give a clue as to what was needed. She had suffered insecurity as a child in a similar situation and had been treated with shame and disapproval. She needed, as part of her preparation for the ordeal, to be helped to remember these earlier life incidents with her parents and the professional person involved, and to abreact some of her emotion in connection with the ordeal. This would make her better able to see the bronchoscopic examination for what it was rather than a childhood kind of nightmare. It would not have needed the services of a psychiatrist to help her either. It would merely mean that her physician, if willing, could have asked her to discuss her feelings about surgical procedures and to speak of any fear reactions she

had picked up during childhood. He could have encouraged her to ventilate her feelings and put her in better emotional condition for the procedure in question.

The reason this is not done more often is because (1) the average physician or surgeon doesn't like tears and the accompanying emotional and physiological reaction; (2) he isn't sure how long the emotional reaction should last to be beneficial; (3) he is afraid that if he makes the patient sad before his operation, the patient is pretty sure to be even more so during and after the operation; (4) he likes the patient who approaches an operation calmly and cheerfully, since it implies trust and confidence in him. Jocularity may be good for some patients in some situations but it is not a good blanket rule for all.

Case 3 (Medical Study).—A thirty-six-year-old housewife with two children told the following story: "In the course of a routine check-up, my doctor found I had a fever of a little less than 100. He said I should come into the hospital to have it studied. I got help to take care of the children and came in. I had tests day after day, x-rays, blood tests, blood counts, urine examinations, et cetera. Each day it was something different. Each day I would ask the doctor what he had found but he wouldn't tell me. I hate to be treated like a child or a simpleton. I never did find out. I paid for all the tests and I hope he learned something. I didn't. I just lay there and fretted and worried about the kids. I guess the fever went away or he decided I just ran a fever. Anyway, nothing I know came of it. I wish he had talked to me and told me what it was all about. He never gave me any medicine or any advice."

Better preparation and better handling could have kept down this patient's tension and made her a better friend of her physician, in particular, and the medical profession, in general. This approach of "I am the physician. You follow orders and pay the bills and I tell you nothing" is not conducive to making calm, co-operative patients. The physician could have said, "Fever is usually a sign of some disease process and could mean something serious. You should have tests done that will rule out the possibility of certain conditions. It will take a few days, but it is worth your time and money to do this." He could have informed her of the results of each day's tests and when it was over he could have said, "We do not always find the cause of every fever. Yours has subsided and the tests did not reveal any disease. You can at least be assured that you do not have any serious condition." This would have made her feel that her time and money had been spent for some profitable study and that her intelligence had been respected, rather than have her continue to feel that she was an unfortunate victim of the physician's ignorance.

Case 4 (Cancer).—Several years ago I had occasion to see a beautiful and sensitive woman in her late forties, who developed a cancer of the breast. Before the operation she was asked if she was prepared to lose the breast if the tumor proved malignant. She indicated that she was, but she was unaware that a radical operation would be performed and that so much tissue in the proximity of the breast would be involved. Several months after the operation she said, "I don't like the way I look and I don't like myself. If I had been given the decision, I would have chosen the less radical operation and taken the risk attendant upon it. I don't want to live a long time. I'd rather live happier and be satisfied with myself than to live a long time."

Many questions arise here. How many surgeons would want to describe to a patient before operation the problems attendant upon a radical mastectomy. If he did describe them and the patient refused surgery, he might feel the patient's decision was not a reliable one and that later the patient would criticize him. What weight shall the wishes of the family have in a decision like this? What are the rights of a patient to decide such things? A patient cannot decide upon his death by euthanasia and have it occur. Can he decide to take a course that might lead to an earlier death? Shall a surgeon play God and decide he *must* take the safer course? Regardless of the various answers to these questions, the patient remains dissatisfied and the physician asks whether he can be versatile enough and discerning enough to give all the needed preparation.

Case 5 (Pain).—A man in his early fifties had had several operations for osteomyelitis accompanied by considerable pain. He recalls one hospital and one surgeon with enthusiastic approval saying, "The surgeon said he felt I should have sedation for my pain and all I had to do was ask and I would get it promptly. His nurse repeated this statement to me and I learned that he meant it. Now you know I'm very conservative about sedation; in fact, I'm afraid of addiction and I didn't ask for much, but it was a real help to know they were concerned about me and would have given it to me if and when I wanted it. Everywhere else I went there was nothing said about it and when I asked, the nurse put on a worried look and said, 'Yes, I guess we can give you something if you need it.' But she always made me feel like a child or a criminal or a dope addict in the making, so I don't think it did me much good when I got it. They didn't care whether I was comfortable and I wasn't. In the hospital I just told you about, they wanted me to be comfortable and I was."

Back now to a surgical situation. Heart surgery is becoming more commonplace these days everywhere, but it is still high-risk surgery. Moreover, there is always that greater danger that death may be imminent because the very organ being worked upon is such an important organ to life. And when life is threatened, the effect is very fear-producing, so fear-producing as to precipitate psychosis in occasional cases. Certainly the least the patient for cardiac surgery should expect is an opportunity to discuss his life as a cardiac invalid and to express himself freely about his misgivings. And, of course, he must be given a chance to ask questions and be given answers.

Contrary to popular opinion there is probably no such phenomenon as "talking too much" on the part of a patient about an impending serious medical or surgical procedure, so far as the patient himself goes. All emotion is better ventilated than held within.

But, there can be such a thing as unjudicious remarks by family friends, nurses, and doctors as the patient talks. Hence calm listening, factual answers, reasonable reassurance, and sensible optimism are very helpful. Many people, including physicians, often discourage talking and disapprove of talking about serious diseases and serious medical and surgical procedures, because they do not know how to stand by steadfastly in the face of fear, frustration, sorrow, anger, worry, grief, or depression. This very capability is most valuable. Its value is illustrated by the following patient.

Case 6 (Surgery).—A woman described her hospitalization for her first baby (without preparation, of course) as follows: "I was scared when I went to the hospital for my first baby. I admit it. No one had told me anything. When the pains came I screamed and asked for the doctor, but the nurses had instructions not to call him and they didn't care to think of my need for him. I made them uncomfortable, I know, and they paid me back. They threw my food at me and pulled my hair when they combed it. With each pain I thought I'd burst, but nobody said one reassuring thing. In fact, they laughed and said, 'Don't you know that millions of babies have been born before and you shouldn't be making such a fuss!' They didn't know one thing to do in the face of fear and pain. The only person in that whole hospital who was decent to me was the minister. I complained to him too, but when he left he had the kindness to say, 'I'm sorry you feel so bad. I'll come and see you tomorrow.' He wasn't afraid of me. No one need have been afraid of me. I was the one who was afraid and the stupid fools didn't see it. I just needed someone to tell me I'd come through all right and ask me to be brave. It's a shame people around hospitals know so little about people!"

Summary

A discussion of preparation leads one quickly into management of the patient during medical and surgical procedure. But the two procedures complement and supplement each other. The doctor can prepare and then he must also explain as he goes. He must share his knowledge with the patient to get co-operation, peace of mind, and a constructive end-result. A doctor should not assume that the size and the dramatic impact of the modern hospital is going to keep the patient's mind off mundane questions of time lost, fear of incapacity, personal recognition, future implications of his illness—not to mention the problem of death.

The general trend is toward a greater frankness between physician and patient, with a few exceptions in serious conditions, which are discussed in the body of this paper.

Medical School Costs

The average cost of a four-year medical school education is $11,644, or $2,911 per year, says the Association of American Medical Colleges.

A major source of this money is the student's family and relatives, including his wife and in-laws. These and his own earning power provide some 82 per cent of all financial resources available to the future doctor. The rest comes from the school, local banks, federal and state governments.

While one-third of all students studied by the AAMC receive $6000 a year or more from their families, 16 per cent receive no money at all.

One of the reasons medical students can rely on subsidies from relatives is that they come from wealthier homes, suggests the AAMC. Forty-three per cent of all medical students' families have incomes over $10,000—compared to a national average of only 11 per cent. On the other hand, only 14 per cent of students' families were in the under-$5,000 bracket, compared to 40 per cent of the United States.

Factors Associatedwith the Psychiatric Referral Techniques of a Group of Physicians

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PSYCHIATRIC REFERRALS present an extremely difficult and important clinical challenge. The proper selection of the patient who should be referred, the timing of the referral, and the all-important preparation of the patient for the psychiatric consultation require a combination of shrewd judgment, knowledge, and tact to such a degree that many physicians feel that these are the most difficult referrals they are called on to make. And, because there are indeed so many difficulties inherent in making such referrals, it is not surprising that the delicate machinery of this process breaks down frequently enough to constitute a pressing clinical problem. It will be the purpose of the authors in this paper to report a systematic investigation of why some physicians seem more adept at this process of making psychiatric referrals than others.

The literature related to this problem is quite small, perhaps intensifying the widely held opinion of physicians that their psychiatric colleagues are isolated from them. Chodoff and Barker[1,2] discuss the psychology of the psychiatric referral; Berlin, Bartemeier,[3,6,7] and others[4,5,8] explain how to prevent the referral from failing. Most of these papers are designed to aid physicians in making better referrals. Those authors who do discuss the causes of the physicians' problems in making psychiatric referrals seem to agree that either defects in psychiatric education or "irrational" attitudes on the part of the referring physician are the major factors to consider, various authors seeming to emphasize one rather than the other.[9-13] However, there has been a general lack of systematic investigation of factors related to optimal or suboptimal referral techniques in a large group of physicians.

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Doctor Boesky is now located in Detroit, Michigan. This material has been reviewed by the Office of the Surgeon General, Department of the Army, and there is no objection to its presentation and/or publication.

Statement of the Problem and Hypotheses

The present study was undertaken to systematically investigate, by means of a questionnaire, the relationship between excellence of psychiatric referral and various other factors in a group of referring physicians. It was intended to explore a variety of variables which might be related to referral skill. No hypotheses were made regarding many of these variables, but based upon the literature and the clinical experience of the authors, specific hypotheses were formulated about certain key variables. These were:

1. Physicians with good training in the field of psychiatry will show more skill in making psychiatric referrals than physicians with poor training.

2. Physicians with a good general knowledge of psychiatry will show more skill in making psychiatric referrals than physicians with more limited knowledge.

3. Physicians with generally favorable attitudes toward psychiatry, psychotherapy, and psychiatric patients will make better psychiatric referrals than physicians with generally unfavorable attitudes.

Method

Subjects.—Subjects for this study consisted of eighty-two physicians working at Letterman Army Hospital* and in dispensaries of Army installations in the San Francisco area. This group included fourteen interns, forty-five residents representing most medical and surgical specialties, eleven hospital senior staff physicians, and twelve general practitioners who worked in dispensaries. In addition, 11 psychiatric residents were used to serve solely as a comparison group. The total of ninety-three subjects represented a return of over 60 per cent, questionnaires having been initially distributed to approximately 150 physicians.

*Letterman Army Hospital is a large Army teaching hospital. At the time this project was in progress (1958), the junior medical staff consisted of 128 interns and residents who were graduates of fifty-six different medical schools.

Procedure.—Discussions were held within various departments of Letterman Army Hospital concerning the purpose of the study. Within a week following the discussion, a questionnaire was placed in the mail box of each physician concerned. An attached letter explained that the questionnaire was to be completed anonymously, and returned to the mail box of one of the authors.

*The Questionnaire:*** The questionnaire consisted of eighty-nine items, some of which had many parts. Questions on this instrument were almost exclusively short, closed-end items, and could be grouped into seven categories.

1. Identifying data
2. Information about medical school training in psychiatry
3. Knowledge of the general field of psychiatry
4. Attitudes toward psychiatrists, psychotherapy and psychiatric patients
5. Procedures followed in the process of making psychiatric referrals
6. The number of patients referred
7. Miscellaneous items

Fourteen questions (some with many parts) pertaining to referral procedures comprised one of the criterion measures, against which other data were compared. These questions inquired about the indications for referral, the type of patient referred, and the manner in which the psychiatric referral process was typically handled. This portion of the questionnaire was discussed with members of the senior staff of the Letterman Department of Neuropsychiatry, who indicated what they would consider to be ideal answers. Based upon their opinion, these questions were scored and considered as a *referral scale*, which was then used as a measure of the skill of physicians in making psychiatric referrals.

Two items pertained to the number of patients referred, which comprised another criterion measure.

Twenty-eight items were taken from specimen examinations in Freshman, Junior, and Senior Psychiatry given at the University of Michigan Medical School during approximately the past five years. These questions comprised the measure of general knowledge of psychiatry.

Twenty-seven questions referred to attitudes toward psychiatry, psychotherapy, and psychiatric patients. These questions were scored as either favorable or unfavorable by inspection, and the scores were weighted on the basis of statistical infrequency. Thus, an unfavorable response that was given very seldom was scored minus 4, (for example, "Most physicians could handle a psychiatrist's job with a little additional training"), while a statistically-frequent favorable response was scored plus 1, and so on. The algebraic sum of these scores was used as a measure of the *favorability* of attitudes. In addition, a measure of *extremeness* of attitude was derived, by noting the size of the obtained score, regardless of direction, based on the original weightings.

Three questions containing ten parts pertained to the amount of instruction in psychiatry received in medical school, and the nature of such instruction. These items were scored and used as the measure of training. An additional question asked the subjects to rate how well they felt they were trained to make psychiatric referrals.

TABLE I. RESULTS BEARING ON THE HYPOTHESES

Variables Compared	Chi-Square	Significance
Training and referral scale	12.9	.001*
Knowledge and referral scale	3.1	.05*
Favorable attitudes and referral scale	.1	N.S.*
Extreme attitudes and referral scale	8.6	.01**

*One-Tailed tests
**Two-Tailed tests

Results.—Results bearing on the specific hypotheses stated above are summarized in Table I. From chi-square analysis of the findings, two of the three variables hypothesized as relating to referral techniques seem to be so related.

The measure of training was very discriminating. Physicians with good training tended to make good referrals, and vice versa, this finding being quite reliable. There was also a significant relationship between general knowledge of psychiatry and referral skill, with knowledge also being significantly related to training (Table III).

The favorability of attitudes was not at all related to the referral skill of the physicians. However, extremeness of attitudes was significantly related. Splitting the subjects roughly in half, physicians in the group whose total attitudes scores were furthest from zero, either positively or negatively, tended to make poorer referrals than the more moderate group. This measure was not correlated with training, but interacted with it. Thus, if a physician had good training he would almost always have a good referral score, *unless* he showed extreme attitudes; while a physician who had poor training, yet had a good referral scale

**Copies of the questionnaire may be obtained by writing to either author.

score, almost always showed moderate attitudes. By relating training to referral skill, then applying the extremeness of attitude measure to the "misses," an estimate of "high" or "low" referral skill was correctly made in seventy-seven out of the eighty-two subjects.

TABLE II. PSYCHIATRIC TRAINING AND PROFESSIONAL LEVEL

	Average Training Scale Score*
Interns (N-14)	20.0
Residents (N-45)	17.3
Senior staff (N-11)	11.6

*T scale distribution: 3 to 24; Median: 18

Examining the three variables of training, knowledge, and attitudes, with respect to the number of patients referred, none of these variables showed a significant relationship (Table III).

The relationships among some other variables and the two criterion measures were also investigated through chi-square tests. Various interrelationships were examined as well. These results are summarized in Table III. The physicians were divided into three levels (staff, residents, and interns) and three "departments" (medicine, which included all clinical, non-surgical specialists; surgery; and general practice), and comparisons made among these groups. The interns had higher referral scale scores than did the residents, who in turn had higher scores than the staff physicians. This result seems related to the findings regarding training, inasmuch as the best training was reported by the younger people—interns and then residents (Table II). Interns also referred more people than residents, and staff physicians referred very few. Concerning the departments, medicine tended to refer many patients, while surgery and the dispensary physicians referred few. While the referral scale scores of the three departments were not significantly different over all, department of medicine personnel showed significantly more skill in making referrals than did the surgeons.

Doctors who reported receiving good training in medical school specifically with regard to making psychiatric referrals had better referral scale scores than those who said their training in this respect was poor. The doctor's estimate of how well he was trained in medical school to make psychiatric referrals is related in a highly reliable manner to his actual score on the psychiatric training scale. Those who reported receiving good training in making psychiatric referrals had better psychiatric training than physicians who said their psychiatric training was fair. Similarly, those who said such training was poor had lower scores on the training scale than either of the other two groups. Only one doctor out of fourteen in the "poor" group had a training scale score above the median.

TABLE III. OTHER VARIABLES

Variables Compared	Chi-Square	Significance
Number referred and training	0.8	N.S.**
Number referred and knowledge	3.4	N.S.**
Number referred and favorable attitudes	1.4	N.S.**
Number referred and extreme attitudes	0.1	N.S.**
Age and referral scale	2.7	N.S.**
Age and number referred	1.9	N.S.**
Age and extreme attitudes	2.5	N.S.**
Training and knowledge	6.0	.01*
Estimate of referral training and training	30.1	.001*
Estimate of referral training and referral scale	7.1	.01*
Professional level and referral scale	6.9*	.05**
Professional level and number referred	0.8*	N.S.**
Departments and referred scale	4.9*	N.S.**
Departments and number referred	6.5*	.05**
Referral scale and physician least important	3.5	.05*
Attitude toward professors and training	5.3	.05**
Attitude toward professors and favorable attitudes	3.4	N.S.**
Extreme attitude and acquaintance with people in psychotherapy	5.5	.02**

*One-Tailed test
**Two-Tailed test
†2 Deg. freedom

One of the questionnaire items asked the subjects to rate who was relatively more important for the successful outcome of psychiatric referrals, the patient, the psychiatrist, or the referring doctor. Physicians who rated themselves as least important in this process had lower referral scores than other physicians.

Physicians with higher training scores showed significantly more favorable attitudes toward their psychiatric professors at medical school than did those whose training was poor.

Physicians with extreme attitudes were less likely to know someone who had received extensive psychotherapy than were physicians with more moderate attitudes. Physicians holding extreme attitudes also tended to be older.† This finding did not reach statistical significance, but age was very homogeneous in the sample studied, which is a statistically limiting factor. (Age was not significantly related to any other variable in fact.) All the above findings are briefly summarized in Table III.

†This finding appears to be in concordance with that reported by Korkes[14] in a survey of attitudes toward psychiatry of 405 New Jersey Physicians.

Discussion

An assumption inherent in the present study is that the physicians' reports about their referral behavior are, in fact, representative of their actual behavior. To the extent that this is not true, of course, any interpretation of the obtained results would be subject to doubt. This problem arises in any study of this type; however, for discussion purposes it will be assumed that the criterion measures are valid.

In assessing the mass of obtained data, certain key findings stand out:

1. *Training.*—The data indicate that the physician's psychiatric training in medical school has a far-reaching impact on his subsequent performance, with regard to making psychiatric referrals. This is true whether an external, "objective" measure of training or the physician's own impression of his training is used. Hence, the first hypothesis is clearly confirmed. Training, in fact, seemed to be the variable which was most strongly and clearly related to referral techniques, of all the variables investigated. This is borne out by the data pertaining to general psychiatric knowledge. These data confirm the second hypothesis, and indicate that general knowledge is related to referral skill. However, general knowledge is also obviously related to training, and may very well be a direct function of such training, although undoubtedly other factors, such as interest and intelligence, may be operating here. The importance of training is even more clearly demonstrated when one considers that it not only seems to predict referral skill better than attitudes, but that it also seems to be the factor responsible for experience being negatively related to referral skill.

The above findings are in a sense quite encouraging. The professionally older people showed less referral skill, as well as poorer training. This suggests that changing trends in psychiatric training in medical school are already being reflected in generally increased skill in the referral process, and will increase in potency in the future. To a certain extent then, the problem of ineffective psychiatric referrals may already be on the way toward being solved. A corollary is that any specific improvement in such medical school training will pay dividends in terms of later inter-professional relationships.

2. *Attitudes.*—The other major factor postulated in the literature as having an important relationship to referral techniques is the physician's attitudes toward psychiatry and psychiatrists. On this point, present findings are somewhat complex. The third hypothesis was not confirmed; positive attitudes not being correlated with skillful referrals. Nor did doctors with positive attitudes refer significantly more patients than doctors with negative attitudes. Thus, statements in the literature that referral techniques are based largely on attitudes and feelings toward psychiatry, either conscious or unconscious, seem to be oversimplifications.

However, by re-classifying the subjects into those with extreme *versus* moderate opinions, meaningful differences were obtained. Doctors with more moderate attitudes made better referrals, reported having better qualified and better adjusted psychiatry professors, and tended to know more people who actually had had some psychotherapy.

The design of this study precludes precise evaluation of which is cause and which is effect in some of the above relationships. As to the meaning of the relation between extremeness of attitude and referral skill, one possibility is that the finding of extreme attitudes pertains to broad personality characteristics in some physicians. Or perhaps physicians who are less skillful in making psychiatric referrals diminish their own awareness of discomfort in such a situation by adopting extreme attitudes toward psychiatry; then attitudes would be more dependent on referral skill and referral skill would not be predominantly dependent on attitudes. (The finding that the more skillful physicians considered themselves more important with respect to the success of the referral seems to support this point of view.)

Probably both of these factors and others are operative, but the most significant contribution to these problems made by the present data is this: with respect to proficiency in making psychiatric referrals, training seems to be a more potent factor than attitudes. The unusually large number of medical schools represented by the subjects in the study would seem to make this finding even more meaningful.

The frequency of some of the attitudes of the group under study was in some cases unexpected and seem of some interest. In terms of generally unfavorable attitudes: 85 per cent felt that "psychiatrists tend to be too isolated from other physicians;" 55 per cent felt that "many psychiatrists think too much along psychological lines and probably overlook a fair amount of organic pathology;" 38 per cent felt that "many intelligent laymen could get as good results with neuroses as psychiatrists do."

In terms of generally favorable attitudes: 90 per

cent felt that "there are not enough psychiatrists available to treat all the people who legitimately need treatment" and "the psychiatrist performs a function about as valuable as that of other physicians;" 80 per cent believe that "some of my personal acquaintances could use some psychotherapy."

Physicians generally felt they had more difficulty in overcoming patients' resistance to the psychiatric referral than with any other aspect of the referral process. The above views are suggestive of areas of acceptance, as well as some areas where psychiatry could work to improve professional relationships.

3. *Self-appraisal.*—The physicians' ability to rate their own psychiatric abilities and training experience was quite encouraging. Those who felt their training in the referral process was poor actually made poor referrals and had poorer training, in general; those who felt they were important in the referral process made good referrals, and many physicians made spontaneous comments about their training or experience which were borne out by scoring of the various scales. These findings are also suggestive of the possibility of further improving interprofessional relationships in the future.

4. *The Psychiatrist's Variable.*—One variable which is doubtless associated with referral techniques was not investigated in the present study. It seems quite likely that the level of psychiatry being practiced at a specific installation and the maturity of the psychiatric staff will be reflected in the kinds of referrals made to that staff. An effort was made to approach this, in the present study, by comparing referral scale scores of doctors who reported being generally satisfied with the psychiatric service, versus those who were less satisfied. No differences were found. However, to more adequately pursue this question, studies should be made in several installations, with a more detailed investigation of the operation of the psychiatric staff.

Summary

An investigation of factors associated with good *versus* poor psychiatric referral techniques in a group of physicians was conducted by means of a questionnaire. The questionnaire was given to 150 physicians at Letterman Army Hospital and nearby Army installations; ninety-three replies were received. In addition to a measure of referral skill, the questionnaire afforded measures of psychiatric training, general psychiatric knowledge, attitudes, and other specific information. It was found that:

1. The degree and kind of training in psychiatry in medical school is strongly related to referral skill.

2. General knowledge of psychiatry is related to referral skill.

3. The favorableness of attitudes toward psychiatry is not related to referral skill, but doctors holding extreme attitudes, either positive or negative, make poorer referrals than doctors who hold more moderate views.

4. Professionally, younger physicians make better referrals than their senior colleagues, probably as a result of their better training.

5. Physicians showed generally good ability to evaluate their training, and could also rate their abilities, to a certain extent.

Some implications of the above findings for psychiatry were discussed. Other findings were briefly described.

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Somatic Equivalents of Depressions

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ALL CASES of depressions share in common the tendency to self-punishment which in the more extreme cases may lead to suicide. The purpose of this paper is to explain that, in some instances, the tendency to self-punishment is expressed as equivalents of the more purely mental and physical phenomena typical of the disorder. The mental symptoms of the usual sort may be so minimal that the general physician, or surgeon, concentrating on the somatic complaint may overlook the depressive features entirely, much to his own embarrassment and the patient's detriment. Whatever your belief concerning the etiology of depressions, the predominant psychologic symptoms involve aggression turned on one's self, manifest by some form of self-punishment and, in addition, this aggression is also used to make persons in the environment suffer to some degree.

If one recalls briefly that all living matter is in a continual state of living and dying, usually referred to as anabolism and catabolism, it is not remarkable that these same tendencies can be discovered in the mental and emotional strivings of man. So long as the anabolic processes just slightly exceed the catabolic ones and by predetermined methods of growth, we may be said to be alive, growing, and developing according to nature's laws. The psychologic equivalent is the need to create, to love, and procreate. If the growth processes deviate from the established patterns of control, we have a cancer which, in one way of viewing, is a revolution of a certain group of cells. Distortions, or deviations, in the psychologic components produce some forms of mental illness.

Most of us are now at the age in which, for the most part, the catabolic processes are gaining on us and little by little they use up our reserves, make inroads on our teeth, turn our hair and then take it (but leave it on chin), and in innumerable ways remind us of the inexorable processes of nature.

In the mental functioning, we have the counterparts of these drives in the aggressive, destructive, or death functions. In depression, the aggressive drives are turned on oneself with a goal of self-destruction in whole, or in part.

Irrespective of your beliefs as to the cause of depression, the symptoms are a matter of general agreement, and self-destructive trends are at the heart of all of them. Certain patients, apparently as a defense against development of a typical depression and the suicidal preoccupations that go with it, select (unconsciously, of course), some organ system for destruction—a partial suicide. The reasons one patient chooses a full-blown depression with suicide, and another develops one of the equivalents are not fully known but are found principally in the developmental history of the patient. We do know that there are definite chemical changes that accompany any kind of stress, and it is not surprising to find that every severe depression has somatic components manifest by changes in physiologic and chemical functions.

In certain persons, complaints of defects in function of some of the body systems are the principal manifestations of the depression, while others use external situations as the equivalent. A few types are presented as examples.

The mouth is one of the most frequent sites of expression of depressive equivalents. The complaint of trouble with the teeth is one of the most often encountered. Patients complain of pain but more often a general feeling of discomfort, a bad taste in the mouth, peculiar sensations in the mouth, and a variety of other rather poorly specified and general symptoms, but all obviously part of general discomfort and suffering. Many patients lose their teeth at this juncture. If the first dentist they consult finds the teeth healthy and suspects the pathology is psychiatric, or owing to some other general disease, and refuses care, the patients will inevitably travel from one dental office to another. This continues until the patient

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succeeds in finding a dentist who is either "bamboozled" by the patient's complaints or overcome by his own desire to make the patient comfortable; or the patient finds a dentist who, in turn, finds an acute pecuniary condition of the roots and gums and removes the patient's teeth. Nature has a way of compensating, however. The dentist is usually punished by the patient because the prosthesis "never fits," does not feel right, and the symptoms persist. Either the patient heckles the dentist by repeated complaints and recriminations against him, or goes to a variety of his colleagues and gossips among friends about the dentist's ineptitude.

By manipulating the situation, the patient has accomplished two things in discharging his hostility onto a body organ such as the teeth. He has partially destroyed himself and has vented his hostile urges upon the dentist. The relief gained by these procedures may for a time prevent further deepening of the depression.

Symptoms referable to the abdominal area, particularly some parts of the gastrointestinal or genitourinary system, are also common depressive equivalents. Among men, the organs most commonly sacrificed in these "partial" suicides are the gall bladder, the appendix, and the prostate. In women, the uterus, tubes, and ovaries are the commonly-sacrificed organs at the first operation, with the appendix and gall bladder held in reserve for the second one, unless the patient has gone to the "clean sweep" type of gynecologist who believes, "Now that I'm in here I might as well clean house."

Eventually, however, the patient runs out of expendable parts and it will be necessary to recognize the illness as psychiatric.

Depending on the detailed psychologic makeup of the patient, surgical manipulation may produce temporary alleviation of the symptoms, but never produces a lasting cure of the depression; in many instances the patient's complaints and recriminations will make the surgeon rue the day the patient walked in his door.

In patients of this sort the signs of being "blue," depressed, and melancholic are not present in the intensity common to most depressed patients. In some cases, the history will elicit complaints of loss of interest, loss of energy as compared to their usual life pattern, and the sleep disturbance characteristic of depression. The physician should not interpret the loss of energy as due to the presumed organ pathology of which the patient complains. The detection that the patient is depressed is difficult and comes from an ear tuned to the persistent, masochistic, and destructive quality of the symptoms. The patients make themselves and those in their surroundings miserable by a variety of clever and subtle ways, and this is often the important clue that one deals with a depression and not with predominantly somatic disease, or an ordinary organ neurosis.

In some patients with depressive equivalents, the organs selected for discharge of the self-destructive drives are already diseased. Phrased differently, the aggression is expressed on existing pathology. During depressed episodes, organs under control of the autonomic nervous system already burdened by hypertension, coronary defects, ulcers (in large or small bowel or stomach), or other pathology, may be the recipients of the aggression and hostility. Some physicians think the amount of depression and self-destructive urge present in a case determines the final outcome of coronary disease, hypertension, or ulcerative colitis. Other physicians believe that important causes of somatic disorders are psychogenic disturbances, but this is not the forum to debate that issue.

Some patients who are overweight from stuffing themselves, when persuaded or otherwise bedeviled into going on a diet and losing weight, may become depressed. That patients may use food as a tranquilizer is well known, and food may in some instances protect them from a depression in exactly the way that a manic episode may protect a patient from depression. A prominent writer states that obese people have a higher death rate for all causes of death except suicide, but the author does not give the source for the statement.

In one case seen in consultation, the patient suffered from severe and persistent psoriasis which had not responded to many forms of treatment. However, the patient developed a serious depression, and with the development of the serious depression the psoriasis cleared up in a manner that was almost unbelievable in terms of the clearing of the skin and its resumption of an almost entirely normal appearance. As the patient was treated for the depression, and the depressive symptoms disappeared the psoriasis slowly reappeared and resumed its previous state. A recurrence of the depression some years later produced the same cycle. While one can speculate about the psychologic explanation of such a phenomenon, the chemical and physiologic ways in which the body produces the change is not clear at all.

In other patients, the depressive equivalent is expressed by defects in business or personal judgment; these defects are to be distinguished from judgment

defects owing to organic disease of the brain. Symptoms of this type are sometimes very difficult to detect until substantial damage has been done to the family's financial state. A typical example is a housewife who, having lived in a home, raised her children, and established her friends in a neighborhood, decides that the family home is no longer suitable. This may be expressed as a desire to move into something "more modern," or "smaller," or "easier to maintain," or some other rationalization which at first glance seems reasonable enough, but on detailed examination, is obviously not the result of clear thinking. If such a move would cure the depression, it would be an economical way to treat such an illness. Unfortunately, no sooner is the move made than the patient begins to berate herself, the spouse, and anyone else who acquiesced to her decision for allowing her to make this great mistake. Life now becomes a continual preoccupation with the need to move back at whatever financial loss, or if this proves impossible, a continual rumination ascribing all of life's difficulty to this change. Men sometimes change jobs from a well-established position or company to a new one. On close examination, the change is obviously a self-destructive move and not one that has a reasonable chance of being either prestigeful or financially rewarding for the patient. In our restless population, it is not uncommon for people to change houses or jobs, so it is usually difficult or impossible for the family to detect the pathologic nature of such changes until the change has been made and the individual begins to reproach others for not saving him from their error. The self-reproach and the manipulation of family and friends to make them miserable provide the clue.

There are a few cases in the literature, and one of my own not reported, in which psychopathology in a member of the family seemed to prevent depressive illness so long as the patient could be aggressive to the other member of the family. In my own case, the first patient treated was a girl with schizophrenia. Aggression of the mother was an important cause. With extensive treatment, the girl developed a good remission of her symptoms, and as her symptoms improved, her mother developed a typical depression. The mother remained depressed for about three and one-half years in spite of energetic and, we thought, skillful attempts to treat her. At this time the daughter who had subsequently finished school and married began to have trouble in her marriage. As the daughter's marital situation became stressful, the daughter's schizophrenia recurred, and as the symptoms became progressively more schizophrenic, the mother's depression progressively cleared up. Fortunately, or unfortunately, depending on which way your interest went, the girl was again treated, again had an almost complete social remission, and the mother became depressed and has remained so since. The girl has remained well.

A further extension of expression of self-destructive trends on other people is demonstrated by the person who kills a child or spouse and then makes a suicidal attempt. If not successful, the attempted murder usually relieves the tension momentarily and no further suicide attempt is made.

The fact that aggression and hostility turned inward can find expression in symptoms referable to certain body organs suggests that these self-destructive trends (whether of genetic, chemical, or psychologic origin) may also play an important role in the development of serious, fatal pathology of the cardiovascular or gastrointestinal symptoms. Careful work by internists and psychiatrists, chemists and physiologists on the same patient is required to prove this. We also need more research on the social equivalents of depression.

At the moment we can say that depressions are often manifest by symptoms of organ pathology, or by aggression vented on the family; the management is the same as that for any depression. Treatment is basically psychotherapy aided in severe cases by proper medications and in agitated suicidal cases by electroshock. Patients with equivalent states are often more difficult to treat, and dynamic psychotherapy needs to be carried on skillfully and intensively for a long time with much support from the attending physician. Suicide, complete or partial, remains a possibility throughout.

Conclusions

Depressions are manifest by self-destructive trends. In some patients the self-destructive trends are expressed by (1) somatic complaints or, (2) behavior in a business or social sense which is seriously detrimental or which contributes to the discomfort, illness, or death of those about them.

Treatment of equivalents is more difficult than in manifested depression and requires prolonged, intensive, dynamic psychotherapy.

Treatment of Parkinson's Disease With Chlorphenoxamine

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ALTHOUGH many drugs are available for the treatment of Parkinsonism, no one preparation is unequivocally the drug of choice for every patient. Since those individuals with Parkinsonism exhibit wide variations in their response to the different drugs, it is helpful for the physician to have several preparations available even if one agent cannot be proved to be definitively better than another.[1]

This report will present our experience with another drug for the treatment of Parkinsonism—chlorphenoxamine (Phenoxene*). This compound, beta-dimethylaminoethyl (p-chlor-alpha-methylbenzhydryl) ether hydrochloride, is chemically related to diphenhydramine hydrochloride (Benadryl) (Fig. 1). As an antihistamine, it is as effective as diphenhydramine but has less sedative action.[2,3] It has been used in Europe as a histamine antagonist, but not as an anti-Parkinsonism remedy.

Studies have indicated that chlorphenoxamine does not have adverse effect on the blood or visceral organs and is a relatively safe drug.[4] Doshay and Constable[5] reported on its value in the treatment of Parkinsonism and concluded: (1) Chlorphenoxamine is relatively free of toxic effects; (2) it is of value in the treatment of Parkinsonism, particularly against rigidity, akinesia, fatigue, depression, and weakness; (3) it is less effective against tremor and, (4) it gives greater strength, freedom of movement, and longer duration of action than many other remedies. They found that chlorphenoxamine improved 53 per cent of patients who were inadequately helped by other remedies. In their experience, any new drug for Parkinsonism had clinical merit if 30 per cent or more of the patients obtained greater benefit than they could with other compounds.

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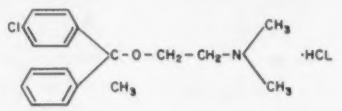
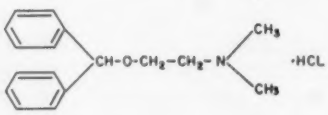
Clinical Study

This series consisted of forty-nine patients. Of these, forty-six had Parkinsonism, twenty-one idiopathic, thirteen postencephalitic, and twelve arteriosclerotic. Other diagnoses included striato-cerebellar degeneration (one) and essential or familial tremor (two). The patients were typical of those of any clinic. The majority had tried many remedies with only indifferent success, and the chlorphenoxamine was usually added to whatever they were taking at the time.



CHLORPHENOXAMINE HYDROCHLORIDE (PHENOXENE)



DIPHENHYDRAMINE HYDROCHLORIDE (BENADRYL®)

Fig. 1.

The average dose of chlorphenoxamine was 50 mgs. (one tablet) three times daily. Patients who noted no effect from this dose were advised to increase it slowly. A few patients exceeded a dose of 50 mg. four times daily; one patient with postencephalitic Parkinsonism found the drug of most value when taken in a total dose of over one gram daily (in addition to large amounts of other anti-Parkinson drugs!).

The results of our study are listed in Table I.

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*Phenoxene is the Trademark of the Pitman-Moore Company of Indianapolis, Indiana, to whom we are indebted for providing this drug.

With the highly subjective nature and daily variations of the Parkinsonian patient's symptoms, it seemed wise to interpret results only in terms of improvement or lack of improvement.

One patient with essential tremor found chlorphenoxamine very effective in relieving tremor while another patient with the same disorder found the drug ineffective. One patient who manifested a Parkinson-like syndrome in addition to signs of cerebellar dysfunction found slight improvement in muscle rigidity and tremor.

Of the forty-six patients with Parkinsonism, six found chlorphenoxamine satisfactory as the only medication for their Parkinsonism and also more valuable than the standard antispasmodic agents—trihexy phenidyl (Artane), cycrimine (Pagitane), and procyclidine (Kemadrin). The other sixteen improved patients (72 per cent of those who reported improvement), felt that chlorphenoxamine was of most value as an adjunct to other drugs.

TABLE I. RESULTS USING CHLORPHENOXAMINE IN PARKINSON'S DISEASE

Type of Parkinsonism	Improved		Unimproved	
	Number	Per Cent	Number	Per Cent
Idiopathic (21)	10	49	11	51
Postencephalitic (13)	7	54	6	46
Arteriosclerotic (12)	5	42	7	58
Total	22	48	24	52

As with the other antispasmodic agents, it was found that tremor was least affected by chlorphenoxamine. Doshay and Constable indicated that tremor might be accentuated in some patients. We had similar reports of increased tremor but felt that this was not a true increase, but rather the return of a tremor that had been previously better controlled. Some patients mentioned a general sensation of "feeling better," somewhat akin to what might be expected from a mild stimulant or an ataractic drug. Other patients noted decreased rigidity and akinesia. However, most patients who were aided observed some improvement of all of their symptoms. Therefore, our series would not allow us to be as specific as Doshay and Constable in delineating the particular symptoms that were helped most and comparing this action with the other standard anti-Parkinson drugs.

Side Effects

Side reactions were not troublesome. Only three patients discontinued the drug because of reactions, two because of dizziness, one because of nervousness. Fourteen patients (28 per cent) reported fifteen side effects (Table II).

A specific merit of chlorphenoxamine is of its value for patients who cannot take antispasmodic agents because of side reactions. Even though it may not prove to be as effective as the atropine derivatives, the reduced side reactions may make it preferable.

TABLE II. SIDE EFFECTS USING CHLORPHENOXAMINE IN PARKINSON'S DISEASE

Reaction	Number
Dizziness	5
Numbness in hands	2
Nervousness	2
Warm, sweaty feeling	1
Blurred vision	1
Dry mouth	1
Confusion	1
Mental dullness	1
Swelling of feet	1
Total	15

Conclusions

1. Chlorphenoxamine (Phenoxene) has value in the treatment of all forms of Parkinsonism, benefiting about half of the patients to whom it was given.

2. As the major medication for the patient with Parkinsonism, chlorphenoxamine does not seem to be as effective as the antispasmodic agents, trihexyphenidyl (Artane), cycrimine (Pagitane), and procyclidine (Kemadrin).

3. The primary value of chlorphenoxamine is its value as an adjunct to antispasmodic drugs.

4. The average dose is 50 mg. (one tablet) three times daily but larger amounts may be necessary, especially in postencephalitic Parkinsonism.

5. Side reactions are usually minimal. Dizziness is the most common complaint.

6. Patients who are unusually sensitive to atropinic side effects with the usual drugs may find chlorphenoxamine of particular value.

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Tetanus-Like Dystonic Reaction to Trifluprom azine Hydrochloride

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TETANUS is so uncommon in urban medical practice that many physicians have never encountered a case. However, all recognize the disease as a constant threat. If a case of tetanus is to be recognized early, the diagnosis frequently must be based on minimal signs. Dystonic reactions to certain of the phenothiazine group of drugs have been described in the medical literature. Marked trismus has been a characteristic of these dystonic reactions. Several authors have noted the similarity to tetanus. The following is a case of a dystonic reaction to Vesprin®,* a phenothiazine derivative, which was seen in a clinical setting compatible with a diagnosis of tetanus.

Case Report

J. P., a twenty-seven-year-old white woman, registered nurse, came to the emergency room of the Oakwood Hospital at 4:05 P.M., Oct. 17, 1959. She complained of spasm of the jaw and facial muscles. She had been well and under the care of an obstetrician because of pregnancy of approximately two months' duration. At 1:30 P.M. she had noted gradual onset of a "drawing" or "tight" sensation over the right malar area of the face. This spread to include the right side of the mouth, then the left side of the mouth. She experienced difficulty in breathing and was brought to the hospital.

She was examined and found to be suffering from spasms of the facial, masseter, pterygoid, and tongue muscles. The spasms were sustained, but intermittent in nature, lasting approximately one to three minutes. By turns, a typical rhizus sardonicus was present, inability to open the mouth, and inability to close the mouth. Spasm of the tongue muscles was quite marked, the tongue being forced out between the teeth which were partially occluded. The patient was completely alert and very apprehensive. The spasms seemed to be aggravated, and at times initiated, by speaking. Neurologic examination was otherwise within normal limits. There was no difficulty in breathing through the nose. Further examination of the head and scalp revealed no abnormality. The eyes were normal, as were the ears and throat. There was no cervical adenopathy. The chest and lungs were normal. The breasts were normal. The heart was of normal size. The heart rate was 96 per minute. The cardiac rhythm was regular. There were no murmurs. The blood pressure was 120/80 mm. Hg. The abdomen was normal. Examination of the lower extremities revealed the presence of adhesive plaster bandages over necrotic tissue. The patient had been receiving treatment for plantar warts on both feet from a chiropodist. These treatments consisted of applications of a salicylic acid preparation weekly during the four preceeding weeks.

The patient had been previously immunized against tetanus. The last injection had been given nine years previously.

It was felt that the presence of a necrotic tissue lesion completed the requirements for a clinical diagnosis of tetanus.

Treatment was begun at 5:50 P.M. with sodium phenobarbital 0.12 gm. given intramuscularly. This dose was repeated at 7:05 P.M. After a negative skin test for horse-serum sensitivity, 15,000 units of tetanus antitoxin was placed in 500 cc. of 0.9 per cent sodium chloride and given intravenously. Another 20,000 units of tetanus antitoxin was given intramuscularly. A second intravenous infusion of 1,000 cc. of 5 per cent glucose in 0.9 gm. per cent sodium chloride was started at 10:20 P.M. An additional 20,000 units of tetanus antitoxin was added to this intravenous fluid. Procaine Penicillin 400,000 units with streptomycin 0.5 gm. was given twice daily. Sodium phenobarbital 0.12 gm. was repeated at 10:30 P.M. and 6:00 A.M.

Shortly after receiving the sodium phenobarbital and the starting of the intravenous fluid containing tetanus antitoxin, the patient became symptom-free and remained so. The patient was seen in consultation by a surgeon. Approximately sixteen hours after admission, the patient was taken to the operating room where debridement of the necrotic tissue of the plantar areas was performed. There was one large 4 cm.-in-diameter area and two smaller 2 cm.-in-diameter lesions on the right foot. On the left foot, one 1-cm.-in-diameter lesion was debrided. No anaesthesia was needed. No local infiltration of tetanus antitoxin was done. The procedure was uneventful. The patient remained in the hospital for five days. There was no complaint except for some soreness of the muscles of mastication. The temperature was 99.6 degrees Fahrenheit on the second hospital day. The tetanus antitoxin administered totalled 75,000 units.

Laboratory studies were within normal limits. Erythrocytes numbered 4,700,000 per cubic mm. Hemoglobin was 12.3 gm. Leukocytes numbered 9,500 of which 59 per cent were neutrophils, 37 per cent were lymphocytes, 3 per cent were monocytes, and 1 per cent were eosinophile. Urine analysis revealed a specific gravity of 1.018. There was no sugar or albumin. Microscopic examination revealed no

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*Vesprin® (trifluprom azine hydrochloride) is the registered trade mark of E. R. Squibb and Sons.

formed elements. Serologic test for syphilis was negative. Serum proteins totaled 6.6 gm. per 100 cc. The albumin fraction was 4.1 gm. per 100 cc. The globulin fraction was 2.5 gm. per 100 cc. Serum Calcium was 9.3 mg. per 100 cc. Serum potassium was 5.0 m.Eq./l. Microscopic examination of sections of the debrided tissue showed hyperkeratosis and parakeratosis compatible with veruca plantaris. Culture of the debrided tissue revealed no growth of organisms.

It was found upon further questioning after admission that the patient had visited her obstetrician on the previous evening. She had been given a supply of Vesprin tablets, 10 mg., and had taken one or two tablets that evening and one tablet on the morning of admission. The Vesprin was continued during the hospital stay and after discharge. There was no recurrence of symptoms of dystonia in the hospital while receiving Vesprin and phenobarbital, nor at home with Vesprin alone. The patient discontinued the medication voluntarily ten days after discharge because she felt that it was no longer relieving the nausea of pregnancy.

The outstanding features of this case are, as follows:

1. A clinical diagnosis of tetanus was made on a healthy young pregnant woman who had been immunized against tetanus nine years previously.

2. Conventional treatment for tetanus resulted in complete control of all symptoms within one hour. The brevity of symptoms suggested that another cause should be sought to account for the clinical picture.

3. The patient had been started on Vesprin, in the usual dose, approximately twenty-two hours prior to the onset of symptoms. There was no interruption in the administration of Vesprin during the hospital stay, nor for ten days thereafter. There was no recurrence of dystonic symptoms in spite of the continued use of the drug.

Discussion

The diagnosis of tetanus is not difficult if it is kept in mind. Muscle spasm is the clue, particularly the muscles of mastication and facial expression. If there is a necrotic lesion, or a history of recent penetrating injury, the diagnosis is more certain. There can be no help from the laboratory. Presented with these two findings in a patient, the burden of proof would fall to him who denies the diagnosis of tetanus. This is true, especially if there has been no recent immunization against tetanus.

It is quite clear, after study of the recent literature, that tetanus may be mimiced by the dyskinetic side effects of some of the phenothiazine group of drugs. A careful inquiry must be made regarding medication being taken by the patient. The physician who is called upon to treat the emergency situation is frequently not the same one who has prescribed the offending medication.

Included in the group of phenothiazine derivatives are the following drugs: Thorazine, Sparine, Tentone, Pacatal, Compazine, Dartal, Trilafon, Stelazine, Permitil, and Vesprin. These drugs have proved most useful, and have gained wide acceptance in relieving anxiety, tension, and restlessness. Certain somatic reactions have been observed in the use of some of them. These reactions are, as follows: weakness, fatigue, nausea, constipation, dry mouth, dizziness, epigastric distress, headache and hypotension. These somatic complaints have been transient and do not interdict the continued use of the drug.[1]

Three types of extrapyramidal neurologic symptoms have been recognized with the use of some of the phenothiazine drugs. The first, a drug-induced type of Parkinsonism is the best known. The second type is characterized by dystonia, or muscle spasm. The following have been described: trismis, torticollis, facial grimacing, dysarthria, labored breathing, involuntary muscle movements, scoliosis, lordosis, opisthotonus, and tortipelvis. The third type has been termed akathisia. This is best described as a motor restlessness or an inability to "sit still." The patient feels driven, may pace the floor, constantly wring the hands, or change position frequently.

These drug-induced extrapyramidal symptoms, Parkinsonism, dystonia, and akathisia, are reversible. It is possible to control or eliminate them by reduction of the dose, mild sedation, or antiparkinsonian drugs. The drug may be continued provided the extrapyramidal symptoms are adequately controlled by additional drugs. Some patients will develop increased tolerance to the drug.

There is varying opinion as to the incidence of the side effects of the phenothiazine group of drugs. Freyhan reported on trifluoperazine (Stelazine), a compound closely related to triflupromazine hydrochloride (Vesprin).[2] In this report, 64.4 per cent of patients developed extrapyramidal syndromes. The time of onset was in the first three days in 85 per cent. As related to dosage, the side effects are not dependent on higher doses but occur with minimal doses as well.[2]

Freyhan wrote, "The key to effective management of the extrapyramidal reactions is their prompt recognition. It would be difficult to estimate how often drug-induced dyskinesia has been misdiagnosed as encephalitis, meningitis, tetanus, or tetany, especially

in the case of women and children who receive phenothiazine compounds for non-psychiatric purposes."

Most authors have minimized the seriousness of the side effects of these drugs. It should be noted that one death has been reported, following use of Stelazine in large doses, a case of respiratory arrest.[3] More than one drug had been employed in this case.

Summary and Conclusions

A case of tetanus-like dystonic reaction to Vesprin® is described in a young pregnant woman. Complete relief of symptoms was achieved by conventional treatment for tetanus. Because of the widespread and increasing use of the phenothiazine group of drugs, physicians should be alert to the possibility of being suddenly confronted with a bizarre, frightening, neurologic problem which demands immediate treatment. One of the barbiturate drugs will afford rapid relief.

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Cat Scratch Disease in Minnesota

Epidemic Occurrence.—The epidemic of cat-scratch disease in the Minneapolis-St. Paul area is the third recognized epidemic of cat-scratch disease, the second recognized in North America. In the first year, twelve cases developed between October, 1955, and February, 1956; in the second year, six cases occurred between September, 1956, and January, 1957. All cases of cat-scratch disease reported in North America were reviewed and a similar fall and winter preponderance noted. About 90 per cent occurred during the months of September to February.

Family Epidemics.—Cat-scratch disease was observed in epidemics of two or three cases in four families, and in single cases in four other families. Both groups were similar in that three of the four families had one or more additional family members with positive cat-scratch skin tests. Among the thirty-eight apparently well family members, ten (26.4 per cent) had positive cat-scratch skin tests indicating an asymptomatic infection. Attack rate, clinical cases, and positive reactors, totalled twenty-four of a possible fifty-two (46.1 per cent). All families had cats aged three to seven months at the time of onset of the index case. This observation is probably explained by the fact that young and playful kittens scratch frequently. Cases occurred as late as forty-eight days after the last cat contact. In the family epidemics, the interval between cases varied from three to sixty-one days.

Intradermal Skin Test.—The specificity of the intradermal skin test with cat-scratch disease antigen was evaluated in six groups: (1) Well members of families with one or more cases of cat-scratch disease had an incidence of ten of a possible thirty-eight (26.4 per cent). (2) Well members of families of patients ill with a disease other than cat-scratch disease had an incidence of two of a possible thirty-seven (5.4 per cent). (3) Hospitalized children without clinical cat-scratch disease had an incidence of six of a possible 119 (5.1 per cent). (4) Outpatient and hospitalized adults without evidence or history of cat-scratch disease had an incidence of four of a possible fifty (8 per cent). Both group 5 (veterinarians) and group 6 (physicians) had an increased incidence of positive skin tests. The general population, groups 2, 3, and 4, had 5.8 per cent positive reactors; therefore, a positive cat-scratch skin test has a confidence level of about 95 per cent.—W. J. Warwick, M.D., and R. A. Good, M.D., *American Journal Diseases of Children*, August, 1960.

Phenomena of Transference in the Practice of Medicine

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DOCTOR-PATIENT relations have been popular as a topic for postgraduate presentation. The public relations approach fails to help with complex, puzzling, and even irrational behavior we observe on the part of some patients. To say that some behavior is "unreasonable" is to admit our lack of knowledge of its reasons. To say that our reactions are absurd, unbelievable, and without a cause is to admit that their causes are unconscious. Such *seemingly* inexplicable events, however, are very common in the practice of medicine. Through the irrational part of the patient's relation with his doctor, the patient may find himself miraculously cured, unnecessarily uncurable, experience "unjustifiable" rage and resentment, and other feelings towards his doctor. Sometimes he may become involved in troublesome misbehavior.

This type of irrational response of a patient to his physician has been found by Freud to have meaning and value. Freud noticed that patients could give up their illnesses, and achieve their own recovery when they felt themselves to be "under the influence of their doctor." This had been known for some time. Freud, however, escaped the megalomanic belief in "animal magnetism," and postulated that it was not he but "something the patient read into (him) that was the effective agency."[1] This was the discovery of transference. The insight into its meaning was now possible because Freud previously discovered the existence of the unconscious part of the mind, as well as its rules of operation, namely, the displaceability of feelings from one object representation to another, condensation, symbolization, and the indestructibility of unconscious strivings. As K. Menninger states: "Having discovered the existence of the unconscious and repressed memories, it was possible for him to see that the patient was reliving with him an interpersonal relationship which has been incompletely gratified in its original setting."[1] A person acting in transference responds to his perception of a new object as though he recognized a figure from his own infantile past. This represents an infraction of one of our most precious functions: the testing of reality. We can expect that this is done only on the behest of powerful forces.

The primary function of the mind is that of integration and the mastery of stimuli in such a way that a reasonable fulfillment of the needs of the individual is attained with the least danger to his survival. One of the difficult aspects of this function is the mastery of very intensive stimuli. Such stimuli are capable of overwhelming the individual. It is conceivable that overwhelming stimuli may cause shock and even death. Variables influencing the outcome include the intensity of the stimulus, the preparedness of the individual for the mastery of this stimulus, and his resources and strength to master it. If the stimulus is very intense, it may be necessary to temporarily suspend all ego function including consciousness—thus syncope in trauma. The assimilation of traumatic awareness, however, can only be delayed, but not avoided, without the person losing his bearing on reality. It becomes necessary for him to return to the memory of the event, and rework it in his mind. Such "reworking" may take place in one's thoughts, dreams, fantasies, and other mental events.

Unfortunately the use of words, thoughts, and even insightful imagery is not available for the integration of unconscious conflicts. This is a particularly serious state in view of the fact that a good portion of one's unresolved tensions consists of unconscious conflicts of titanic strength which never rest in their striving

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for fulfillment. One finds that these are characterized by the following properties:

1. Most of these conflicts have to do with infantile strivings particularly related to the child's attempt to master his own needs and his relation to his love object.
2. The nature of the conflicts is not conscious because they have given way to repression.

One of Freud's ways of defining repression is:

> . . . one instinct or instinctual component fails to accompany the rest along the anticipated normal path of development and, in consequence of this inhibition in its development, is left behind at a more infantile stage. The libido current in question then behaves in relation to later psychological structures like one belonging to the system of the unconscious one that is repressed.[2]

This account by Freud of the first step in the mechanism of repression accentuates the fact that basic to the normal development of the individual is his ability to develop his emotional life to an adult level of integration and that important in this psychosexual development is his relation with his love object. To the extent, then, that an individual has unresolved repressed conflicts, he has an arrest in his psychosexual development and has a compelling need to return and recreate such situations in his life in an attempt to master them.[3] The more inhibited an individual is in his ability to gratify his needs the more likely he is to be acting upon them without being aware of it.

The basic principle of transference behavior is that one is condemned to act out all impulses and conflicts of which he cannot be conscious. As Freud put it: "The patient reproduces instead of remembering."[4] In his need to remain unaware of the nature of the repressed motivation and meaning of his action, the patient has a need to "draw in" and involve his current objects. People in certain positions are especially suitable for transference of unconscious memories because they are identified with a certain role. Thus the policeman or the teacher might be the object of transference of feelings originally experienced in relation to one's parent who enforced "the law" at home. Similarly, a nurse might be identified with mother, a fellow worker with a sibling. The transferred feelings the patient experiences are real but their sources have been described by Freud as "highly lacking in *regard for reality*," and yet these experiences are, under circumstances of medical treatment, "as inevitable as the exposure of the patient's body."[4] The mere fact that we deal with patients in a situation in which illness has forced them to regress to modes of behavior they had not indulged in for years, sets the stage upon which the drama of their infantile conflicts must come back for a repeat performance.

This phenomenon makes possible the patient's "putting himself in his physician's hands" and obeying his instructions like a good child. Such a reaction is an indispensable condition of treatment; when a patient cannot indulge in it we have a serious problem. Unfortunately, along with this therapeutic bonus, we have to contend with other reactions as well. In terms of the psychoanalytic theory of drives, we can roughly classify acting-out of transference according to the two major drives in terms of their inhibition or overindulgence. In the first group we might find the prude, coward, or prohibitionist; while in the latter, we notice the libertine, bully, or masochist—as well as the individual involved in addictions or perversions. Freud summarized this as follows: (The patient) "reproduces everything in the reservoir of repressed material that has already permeated his general character—his inhibitions, disadvantageous attitudes of mind, and his pathological traits of character."[4]

The patient responds to a particular part of his image of his physician. The physician is not experienced as a whole object, as a person in himself with all varying implications, contradictions, and aspects of an individual; the patient's response is merely to the one aspect of his experience with the doctor which represents his unresolved conflicts which he merely picks out as subject for his repetition. This particular aspect of transference reactions becomes very important because it makes it sometimes difficult for the physician to know to what stimulus the patient is reacting. Where the physician may see himself as a person devoted to the helping of his patient, the patient may himself experience the physician as an attacker.

Case Illustrations

A patient presented himself with the symptom of impotence. His doctor instituted a course of prostatic massage. After two weeks of this treatment, the patient had to be admitted to a psychiatric hospital in a state of homosexual panic and paranoid schizophrenia. The patient believed that a mysterious man was going around and spreading rumors that he was a homosexual. Anamnesis revealed that the patient's impotence developed after his former lover broke up with him in order to marry another man. It was the presence of this other man that aroused anxiety about his own sexual function and caused his impotence. The doctor, unwittingly, made real the patient's feared fantansies of homosexual assault, to the point that the patient had to flee into a psychosis.

The anticipation of the patient's reaction is made more complicated by the fact that the patient himself is not only unaware of his reaction but also often unconscious of the particular aspect of the physician to which he is reacting. The following case illustrates the patient's failure to understand the nature of her transferred feelings:

A middle-aged woman was seen after she developed a rather severe depression following a hysterectomy. During the period of her convalescence from the hysterectomy she made expressions of her love to the physician and felt that the physician had spurned her and did not return her affection. One would at this point be inclined to take it for granted that it might have been either the patient's gratitude to her doctor or his own personal attractiveness that was involved in this reaction. However, neither was the case. The patient had for most of her life been very devoted to her own appearance and had invested a great deal of her own feelings in this aspect of her femininity. Prior to her operation she became so concerned about her age and "fading beauty" that she began nagging the husband and insisting on increasing reassurances of love to her. The husband did at times become so provoked with her that he called her an "old hag." One of the needs the patient had at the time was to be reassured of her femininity, particularly after she lost her womb. When one has an opportunity to understand the underlying conflicts it becomes quite apparent that it would be entirely inappropriate for the physician to accept the patient's confession at face value or to respond to it in some manner of sexual activity.

The patient who was thus acting-out her transference was unaware of the fact or meaning of such acts. The "hysterical character's" (a person who has repressed her genital sexual needs) overt seductiveness is as a rule accompanied by a complete unawareness and inability of acceptance of her seductive behavior. When the object of seduction responds with any type of overt sexual behavior, the patient has no recourse but to accuse the physician of "undue familiarity" or of attempted rape.

The patient's need to repeat various traumatic situations will include a varied and subtle spectrum of behavior. The need to provoke the physician may include the patient's need to mistreat himself by neglecting the doctor's advice, by refusing to conform with ways of behavior which an illness calls for, and particularly in the manner of keeping appointments, paying fees, and reacting to the reality of illness itself.

The Physician's Reaction to Transference Acts

Transference behavior will often be contrary to the patient's best interest or even to his recovery-wish, and many times quite inappropriate for the patient-doctor relationship. Thus the physician will be faced with frustration of his therapeutic enthusiasms. His own image of himself as a physician may be jeopardized by the behavior of the patient. This is particularly so if he takes the patient's activity for the face value rather than attempting to find out what it really means. When the patient's behavior causes unpleasant reactions in the doctor it is easier to become aware of the inappropriateness of such behavior. It is more difficult to resist involvement in an activity of the patient which flatters, pleases, or in some way gratifies unconscious needs of the physician. It therefore becomes important for one to consider the physician's reaction to behavior of the patient which, in last analysis, is inappropriate for the doctor's office.[5]

In order to be fully aware of the implications of the situation one should stop to consider that the relation between the physician and his patient represents a rather *intimate contact in which medical-ethical behavior can be maintained only in the face of continuous temptation to violate the therapeutic alliance.* Since it is impractical to list all the possible transferences of patients, or the varieties of undesirable or dangerous responses on the part of the physician, we will have to concentrate on a few basic principles involved:

1. Paying attention to his own reactions to the patient's behavior is necessary as a health measure for the doctor, and is essential in the best interest of the patient.[7,8]

2. The patient does not react to the "real" personality of his doctor but to his perception of him. Neither self-flattery nor righteous indignation need be the physician's response when this is kept in mind. Freud, speaking of one kind of transference reaction, put it as follows: (The physician) "must recognize that the patient's falling in love is inducted by the analytic (in our case, medical) situation and is not to be ascribed to the charm of his person. He has no reason whatever to be proud of such a 'conquest.' "[6] Similarly, other reactions by the patient, for example, paranoid projections, should not be taken as proof of the doctor's guilt.

3. No matter how unreasonable the patient's demands may be, and how kind the doctor's refusal to participate in the patient's need for transference, the patient will feel rejected and angry. The refusals to participate should be given *solely on the basis that these requests are incompatible with the therapeutic relation.* The doctor should then be ready to notice, and to discuss with the patient her reaction to her frustration.

4. The discussion of the patient's reaction to the "rejection" cannot be left unverbalized, or the patient may have to take revenge by leaving his doctor, causing himself an aggravation of his condition, or other untoward reactions.

5. The only way that one can be helpful to a patient who is acting in this way is to reflect to the patient in a mirror-like way the nature of his behavior and its inappropriateness. One may suggest that the patient pay attention to this symptomatic behavior as being his opportunity to become conscious of his conflicts and to attend to them. Neither the doctor nor the patient knows at this point the *real meaning* of the transference.

Problems of Counter-Transference

The ability of the physician to utilize the insight in regard to transference behavior will be interfered with by his own unconscious conflicts. If the patient's behavior touches on unresolved conflicts of his own he may be drawn into "misbehaving" with the patient. On the other hand, he may experience feelings of varying kinds toward the patient without the patient having provoked it in manifest behavior. It becomes therefore idiomatic that the greatest amount of insight on the part of the physician into his own feelings is the greatest health insurance for himself and his patient.[8] One should not, however, gain the impression that this "gaining of insight" is a one shot operation after which the doctor is immunized to such pathogenic exposure. On the contrary, a personal analysis is not an insurance for life against emotional drives and needs. One's mental health and integrity requires constant attention. There are always areas of unresolved conflict, "sensitive spots" in which our effectiveness as physicians is seriously limited. As Dorsey put it poetically—

> What we have repressed, we cannot use for purposes of identification.
> What we cannot identify with, we can only hurt ourselves with.[3]

Fortunately, there are a number of signals which warn us of dangerous exposures. The most common and important one is the physician's development of an emotional response, which is incompatible with his objective position. Paying heed to such danger signs can be of the greatest value. Whenever one is aware of intense anger, disgust, shame, sexual excitement, boredom, curiosity, or other intense emotional responses, one may be sure that this indicates that an area of his own unhealed conflicts has been exposed. He is responding with one or another form of psychic pain. It is proper to consider the intensity of one's reaction. At times it may be enough for the doctor to leave the room for a few minutes to regain his composure. At other times it may be the safest for him (and the patient) for the doctor to disqualify himself from the further handling of this particular case and refer the patient to another physician who will not be disturbed by this particular patient. Above all, it might be possible for the physician to use this warning to try to understand the meaning of the behavior of the patient.

When the doctor is not aware of his emotional responses to his patient, he may become entangled in a counter-transference reaction. The following common earmarks of such a state have been collected here from the works of Menninger, Sterba, and Petty.[9,10]

1. The fear of "losing the patient" resulting in acts which the doctor's best medical judgment precludes.

2. Carelessness in regard to arrangements as to time of appointments and manner of payment by patient (for example, encouraging the accumulation of debts).

3. The need to impress patients or colleagues with the importance of one's patients.

4. The urge to engage in professional gossip about the patients.

5. The feeling that the patient "must get well for my sake," or its opposite: regret upon losing the patient because of recovery.

6. Excessive conscious satisfaction over the patient's praises or disturbance over his criticism.

7. The urge to establish a personal relation with the patient exceeding the professional one, for example, asking favors of a patient.

8. Sudden loss or increase of interest in a case.

9. The doubting of laboratory results and need to repeat tests to allay the doctor's fear of making or discarding a diagnosis.

10. Arguing with the patient, moralizing, or blaming the patient for the failure of therapy.

The awareness of any of the above-listed reactions can be put to good use. The practical applications of this knowledge are many. By becoming conscious of these reactions, the physician can often understand his patient's transference. Such knowledge may prevent the patient's complications, such as invalidism or chronic illness, as well as prevent malpractice or other

law suits. When we put these responses to work for us, we gain new tools in diagnostic and prognostic study, as well as in therapy. Lastly, and less frequently, such responses may warn us of the development of personal difficulties. The early detection of these signs is in the best interest of each individual, and essential in maintaining one's therapeutic effectiveness.

Summary

The "patient-doctor relation" may provoke a number of unconscious reactions on the part of the patient in which the physician finds himself the innocent actor in the patient's attempt to re-enact the drama of his own conflict-weighted life. In order to be helpful to the patient, the physician must be aware of such behavior and beware of becoming involved in it. The most helpful attitude on the part of the doctor is to point out to the patient the inappropriateness of such behavior and encourage the gaining of insight about it. Where such behavior touches on the "sore spots or unhealed wounds" of the physician, himself, he may become involved in the patient's transference action. If he is insightful, he will become aware of emotional responses such as excessive anger, disgust, or other affects. In the best interests of both the physician and the patient such affects should be considered warning signals that something has been presented to him which he, the physician, is not prepared to handle at this time. A referral of a patient of this kind is considered part of wisdom.

Acknowledgment

It is impossible for the author to credit Dr. John M. Dorsey with all the material which was quoted or paraphrased from his lectures. Gratitude is expressed for having had the good fortune to learn and freely plagiarize from him.

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Platitudinous Ponderosity

"In promulgating your esoteric cogitations, or articulating your superficial sentimentalities and amicable, philosophical or psychological observations, beware of platitudinous ponderosity. Let your conversational communications possess a clarified conciseness, a compacted comprehensibleness, coalescent consistency, and a concatenated cogency. Eschew all conglomerations of flatulent garrulity, jezane babblement and asinine affectations. Let your extemporaneous descanting and unpremeditated expatiations have intelligibility and veracious vivacity, without rodomontade or thrasonical bombast. Sedulously avoid all polysyllable profundity, pompous prolixity, psittaceous vacuity, ventriloquial verbosity and veniloquent vapidity. Shun pestiferous profanity, obscurant or apparent.

"In other words, write plainly, briefly, naturally, sensibly, truthfully, purely. Keep from slang, and don't use big words."—*Detroit Free Press*, Graphic, 1926.

Psychiatric Emergencies in General Practice

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MOST PSYCHIATRY is practiced not by psychiatrists but by general practitioners and others engaged in non-psychiatric practice. Because psychiatric emergencies are unavoidable in medical practice of any sort, knowledge concerning these disturbing events is of practical value to physicians. At the Detroit Receiving Hospital there has been continuous research over the better part of the last decade into the etiology and management of psychiatric emergencies. This paper reviews some aspects of this work.

The Nature of the Problem

Any patient who develops a psychiatric emergency is much like a patient involved in any other kind of acute medical or surgical condition, in that he: (1) requires immediate attention, (2) can often do relatively little to help himself and, (3) reliance must be placed upon the technical competence of the physician in helping to re-establish any kind of stable equilibrium.

Major psychiatric emergencies may be considered in one of five general classes: (1) acute psychotic episodes, (2) suicidal threats and attempts, (3) addictive states (including alcoholism), (4) disturbed states associated with senility, and (5) attempted homicides.

Because rational therapy is rooted in an understanding of the nature and course of the disease process, a scheme of a very common mechanism of etiology will be presented which is intended to encompass this entire group. This will be followed by a discussion of treatment, particularly as it relates to general practice, although treatment principles are not basically different for non-psychiatrists than for those in specialty practice.

In considering etiology, constitutional factors are not given a paramount position. Many of the theories implicating constitutional predisposition to mental and emotional disturbances seem to serve primarily as protection for the self-esteem of the psychiatrist. If an illness is attributed to heredity or constitutional inferiority, the necessity to understand it psychologically and to offer appropriate assistance is obviated. While there can be no doubt that there are very obvious differences between individuals present from birth which are related to their capacity to withstand stress, a constricted focus on constitutional factors leads to an unjustified attitude of therapeutic nihilism.

By going one step further and examining the early family life of the patient who has subsequently developed a psychiatric emergency, one does gain evidence of factors which can be understood in psychologic terms and used therapeutically. Upon such examination a pattern of more or less gross family disorganization is found with remarkable consistency. Separation or divorce of parents, a shifting-about during infancy from one adult to another with consequent absence of a consistent and reliable maternal relationship, extensive psychopathology in one or both parents, and deplorable economic disturbances which make any healthy family life impossible—are among the commonest encountered. Since having someone to love and care for him is—to an infant child—an indispensable necessity for life itself, it is most astonishing not that so many individuals grow up to become mentally or emotionally ill, but that they manage to survive at all in spite of such overwhelming environmental hardships. Another observation is made with equal frequency: the person who is destined to develop a psychiatric emergency manages to maintain himself in a reasonable degree of homeostasis prior to the emergency through a very special relationship to one (or sometimes more than one) important person. This person seems to provide the patient with security and protection from the terrors and fears of his chaotic childhood experience. The patient's stability has become dependent in a large measure upon the course of this interpersonal linkage. So long as the intimate psychologic tie to an important figure (usually a family member and often a spouse) is un-threatened, life goes on and some real growth and achievement may take place. This achievement potential may collapse completely, however, if there is any real or imagined threat to this significant relationship. Some persons who develop a psychiatric emergency have had the capacity to develop such an important linkage, not directly to a specific person, but to a group, an organization, or a job. In this in-

stance, the power, prestige, or security that goes with the group situation serves a psychologic function similar to the more personal type of supportive tie.

We are now prepared to understand the beginnings of many specific types of psychiatric emergency. The illness itself often starts with a threat to—or actual loss of—a highly valued relationship. The common denominator seems to be the fear of loss of love, support, or security: in short, a "separation anxiety." It should be pointed out that the sense of "loss" need not be attributable to an actual event to be effective. As a common example, an adolescent suicide attempt may occur after "a funny feeling" has developed that a girl friend's affection is cooling off, even though she has taken no patently rejecting action toward him. The next event following the anxiety thus motivated, depends upon the individual's response to the threatened or actual loss. In response to any loss or frustration all people tend to experience some degree of anger or rage. It is the internal method by which this flood of aggressive feeling is managed that sets the stage for the form of the psychiatric emergency.

What possibilities are there? How can an overwhelming surge of hostile feelings be dealt with internally? There seem to be only three major channels. The most obvious, perhaps, is murder. If the important person doesn't meet the patient's needs, the latter's reactive anger can be discharged by killing the offender (or some "substitute" person) in an outburst of externally-directed, destructive aggression. The second and perhaps more common pathologic means of managing such intensely aggressive feelings is to discharge them against the "self," resulting in a suicide attempt. The third way is for the patient to back away from the conflict provoked by his own aggressive feelings and thus, at the same time, deny the threatening or actual loss. Frequently, this kind of defensive withdrawal can be accomplished only by the patient's making some gross mis-interpretation of reality, although it has the advantage of avoiding the destructive, often fatal, discharge of aggression by the other two major avenues. There seem to ge general tendencies in everyone to handle aggressive feelings in one of these three ways: turning inward, turning outward, or withdrawing. The problem in emergencies is a quantitative one. Regardless of the path the personality may utilize, if the quantity of feeling is sufficiently great, a psychiatric emergency will result.

When an emergency develops, what form will it take? To understand this, we must introduce another factor to render the sequence of events more understandable. The process of psychologic growth involves the abandoning of infantile and childish patterns of behavior in favor of more complex and adult patterns appropriate to the individual's chronologic age. In response to *illness of any sort*, more mature modes of functioning are temporarily abandoned for simpler patterns which belong to a less mature period of life. This retreat (or regression) may be minimal or very profound. The deeper this regression, the more helpless the patient, and the more crucial the doctor's understanding of the events involved. The deeper this regression the less logical the patient's behavior appears, as judged by ordinary standards. In large measure, it is the extent of this retreat and the avenue of discharge of aggressive energy which determines the clinical picture.

Illustrative Cases

With this encapsulated review of some of the more important links in the chain of circumstances leading to an emergency, several brief cases will be cited to illustrate the points involved.

The first is a case of an attempted suicide.

Case 1.—The patient is a man, aged fifty-five, who came to this country as a refugee at the heighth of the recession in Detroit. He had heard fantastic things about America and thought he would have no difficulty in finding a skilled technical job. He could not find work here. Both his wife and teen aged son did. He asked them to turn over their earnings to him, as head of the house, for disbursement. They were resentful. He became enraged and then suspicious of his family, and finally depressed. He began making veiled threats of suicide. He felt useless and unproductive. Early one Sunday morning he stated in a note left to his wife that he was going to Belle Isle. The police found him in one of the shallow lagoons, presumably trying to drown himself. He was admitted and discharged a few days later, when a friend found a job for him at a plant where he worked.

This patient was threatened with the loss of respect from his family, particularly his wife, and also with the loss of his own view of himself as an adequate man. The avenue of discharge of aggression was inward and the retreat from his usual level of functioning was very minimal. The suicide attempt was relatively superficial and he restituted quickly upon being offered the opportunity to work.

The second case is an example of a disturbed older person. The usual assumption about old people is that their mental disturbances are secondary to atrophic cerebral changes and that psychogenic factors have a minimal role. A close study of the manifestations of many thousands of these cases show that this is not

the case and that such patients, in spite of the obvious organic deficit, may fall into the same pattern of etiology already outlined for other emergencies.

Case 2.—This man, eighty-four, although senile, had no difficulty taking care of himself and performing useful household tasks. He began to become quite disturbed and confused in the usual organic fashion. He could remember nothing, roved away from the house and could do nothing for himself. His daughter had been considering moving to another state with her husband and children and it was a matter of concern to him what his own future would be if she should not take him along with her. In this case she did indeed leave him in Detroit (she had little choice about it, owing to the nature of her husband's work) and he was ultimately sent to a state hospital as a disturbed senile psychotic patient.

In this case, one sees clearly enough that the channel for expression of aggression was psychotic in character and the extent of retreat or regression was very marked and likely permanent.

Many clear-cut examples could be cited from among the addictions, but the following example will illustrate the point.

Case 3.—This man had been in Alcoholics Anonymous and abstinent for almost a decade. He was admitted in delirium tremens, the drinking bout having been set off by the fact that for the first time in his life none of his children remembered his birthday and he felt they were losing interest in him.

Here the channel of aggressive expression was dominantly self-destructive, with a deep temporary retreat or regression from his usual level of function.

One further clinical example is shown by the following:

Case 4.—A man in his early fifties was married to a woman many years his junior. They had been married for almost a decade and were seemingly quite happy. Previously he had been married and divorced. On returning home from a brief business trip, he found his wife with a lover. His reaction was alternately one of rage and depression and he brooded about it for several days, neglecting his business. After this period of brooding, he attempted to shoot the rival, but he did it in such conspicuous and silly way that the murder was prevented. When seen initially by a psychiatrist, the patient seemed totally out of contact, unaware of the way in which he came to the hospital, and only after several days did he clearly recall all the events.

In this instance, the aggressive channel was homicidal and the regression was moderately severe but transient.

Treatment

What does one do in dealing therapeutically with these kinds of psychiatric emergency?

The doctor first needs to identify the person or organization of importance to the patient, if he does not already know them. It is then necessary to discover what happened to introduce the idea of personal jeopardy—the separation anxiety. The acute situation is extremely favorable for the outcome of treatment. The essential information that one needs is not hard to obtain, since the other participants in the drama are usually readily available and eager to participate. They are often strongly motivated by their own conscious or unconscious guilt, as well as by a natural desire to help.

The doctor then talks to the patient as directly as possible about what the real situation is, as far as it can be understood, including specifically the nature of the stress and the patient's response to it. Sometimes this process of talking about the hard facts of reality must go on even more intensely with the relatives of the patient. In any case, the emotional demand made on the doctor in dealing effectively with the situation is very great, but on the other hand, demands on physicians are also great in other types of medical and surgical emergencies. Any technique the doctor may use to establish some real emotional contact with the patient is sound medicine. Different doctors may do it differently, but in making this initial emotional contact, the communication which is established with the patient is the all-important step in treatment. This can and does effectively stop the patient's retreat. The physician permits himself to be "taken in" as part of the partially defeated personality of the patient. When this happens, an important stage in the resolution of the emergency is reached. Many non-psychiatric practitioners have the capacity to do this on a purely intuitive basis and with very real success. The acute situation may, and often does, require a pharmacologic adjunct (sedation, and so forth) but no confusion should arise relative to the role of drugs. They are not curative, but adjunctive to the work of the physician who understands and deals correctly with the emergency problem. With consistent support and a thorough, repeated confrontation of the patient with the reality that must be faced, he can begin the difficult process of dealing with his feelings in a more constructive way.

Summary

A schema is presented concerning the nature of psychiatric emergencies. Attention is called to the factors of separation anxiety, aggression, and regression, in determining the manifestations of these syndromes. The crucial role played by the doctor in alleviating the condition is outlined and briefly discussed.

Newer Tranquilizing Drugs

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DRUGS to give a man a sense of peace or emotional comfort have been used since time immemorial and have included everything from alcohol, opiates, the solanaceous group through marijuana, bromides, barbiturates and, more recently, a new group of drugs which we include under the general terms "tranquilizers" or ataractics.

Just how did this come about? What was man seeking? Why did he have to avoid certain unpleasant sensory experiences, signals that came into his eyes, ears, nose, tactile system, taste, or combinations thereof? What was going on within his brain that he was seeking a respite? Was it fear of the dark, the phenomena of nature, attack of animals, by fellow man?

Within him were defenses against anxiety, the same mechanisms we all possess to handle tension. This is normal human physiology which enables a soldier to go into combat despite fear, which permits an individual to go on despite of depression after the loss of a loved one. Man could get surcease from his problems by going to sleep, provided he could fall asleep. Sleep since earliest times has been a wonderful state in which to escape, a repair station which enables an individual who is out of breath emotionally, so to speak, to catch it again. If I may quote Shakespeare briefly, "Sleep, the mother of all good; sleep, that knits the ravelled sleeve of care." But this remarkable mechanism can be decompensated, even as Macbeth learned when he added, "Macbeth shall sleep no more."

Very early man learned that the fermented grape or starchy substance could produce a chemical alcohol, which gave relief from anxious feelings. In larger doses it even produced sleep. Far back the alchemist was present early on the scene to provide drugs from various botanic substances—deadly night shade, the poppy, the hemp plant and others. In more recent times came the discovery of bromides by Ballard (1826), of barbiturates by Baeyer (1863), and most recently that group of drugs which I have mentioned above, the tranquilizers. It was Bein in 1953 who first described the peculiar property of reserpine as a sedative and hypnotic. He pointed out that animals on this substance would become tranquil and assume a resting position, they were not anesthetized and could be aroused by acoustic or tactile stimuli. This observation has been confirmed subsequently in the laboratory, and the electroencephalographic differences between barbiturate and reserpine action in monkeys was noted. The tracings of the animal under reserpine lacked the spindle and delta wave activity which is typical of barbiturate action, but the frequency of the reserpine rhythm suggested a stimulating effect on the reticular formation. In 1952-1953, Jean Delay and Peter Deniker in France, noted that the drug, chlorpromazine, had a remarkable action in patients with agitated status as well as in those presenting symptoms of confusion. They utilized this substance to manage patients with schizophrenia but soon application was found for other conditions. More recently a third substance with a myanesin-like action, meprobamate, was described as having a taming effect on monkeys and a quiescent effect on human beings. Although entirely different in its mode of action, it was said to have a certain component which resembled the quieting or "tranquilizing effect" of the other two drugs. Tranquilization thus became a non-specific term describing the three substances; later to be applied for groups of chemicals which are characterized by entirely different pharmacodynamic effects. Finally, all have become known as tranquilizing or ataractic drugs; called by some, phrenotropic or psychotropic. Chlor-

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Presented at the 94th Annual Session of the Michigan State Medical Society, Grand Rapids, September 29-October 2, 1959.

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promazine belongs to the phenothiazine group and was the first of a number of derivatives from this basic structure.

The remarkable feature of the tranquilizing drugs is their complete dissimilarity in terms of chemical structure, yet their striking similarity in many aspects in action. Thus, both reserpine and chlorpromazine reduce motor activity in experimental animals without inducing anesthesia. Hostility, if present, appears to be reduced by all three drugs, but in different degrees. Monkeys under reserpine and chlorpromazine can be handled without great difficulty but under meprobamate will resist being manipulated. The catatonic-like picture following high dose of reserpine or chlorpromazine is not seen after meprobamate, but the last in large doses will make the patient ataxic. Parkinsonian-like syndromes have occurred in certain patients after a course in reserpine or chlorpromazine but are not seen with meprobamate. Reserpine is typically parasympathicomimetic while chlorpromazine shows no particular shift in autonomic balance although it has significant autonomic effects which are rather diversified. Both drugs (in large doses) will produce hypothermia. Meprobamate has no striking effect on autonomic function. Of the physiologic effects of the drug, the threshold to electroshock is lowered by reserpine but meprobamate has a blocking action on electroshock. Chlorpromazine has a depressant effect on the diencephalic blood pressure regulation. We may also mention that serotonin, an amine which allegedly plays a neurohumoral transmitter role in mental disease, is liberated from the central nervous system and intestinal tract by reserpine but it is not affected by chlorpromazine or meprobamates. It has been pointed out by many investigators that while it is impossible to find a basis in experimental pharmacologic evidence, yet the similarity of the tranquilizing action is such that both reserpine and chlorpromazine may be used interchangeably in many conditions. Meprobamate, on the other hand, is useful chiefly in the states of anxiety and tension associated with muscle spasm.

The difficulty is augmented when one moves from the laboratory of the experimental animal to the area of man. Thus, one may set up a simple experiment in which five men are lined up at a bar. They are of equal weight and height, 160 pounds each, 5 feet 10 inches tall and of comparatively similar body build. A bottle of bourbon whiskey is set before them. They all have jigger glasses of the same size and each man takes five drinks. What are the effects? Man No. 1 becomes increasingly aggressive and finally offers to fight anyone in the room. Man No. 2 becomes increasingly friendly and wants to talk with the other four, if they will only listen. Man No. 3 becomes ardent and begins making passes at the waitress. Man No. 4 becomes depressed, sits with his chin in his hands, staring straight ahead. Man No. 5 gets sleepy and passes out.

Why the difference? They all took exactly the same substance. Why five dissimilar responses? As is well known, alcohol like any other drug of its kind can only depress, it cannot stimulate. We may use an analogy in a simple mechanism known to all, an automobile. If we were to exert a depressive action, by this I mean a retarding action, on the accelerator, we would slow the car. If we were to impose an equally depressing or retarding action on the governor which prevents acceleration of a car, the car would actually go faster. In other words, we would be retarding the retarder and therefore permitting speed-up.

The brain is made up of circuits or loops which are very elaborate. They feed backward or forward, reverberate, and send or receive from other circuits. Thus the brain is a system of balances and counterbalances which enable the smoothing of motion, transmission of sensation, and formulation of judgments.

A movement like the flexing of a forefinger is not "simple." If we were to stimulate the hand or finger area of the motor cortex with an electric current, the forefinger would move, but not smoothly. There would be a quick jerk. Actually, we could not move the forefinger unless we were aware of it, and the motor cortex must receive signals from some part of the sensory cortex, particularly the parietal lobe, in order to initiate the movement. The motor cortex is nothing but a way station, an internuncial, so to speak. It feeds down through the pyramidal tracts and finally reaches the region of the anterior horn cell. But again, an impulse in this pathway will induce only a jerk of the finger, not a smooth movement. Many tracts feed into the spinal cord, the tectospinal, the rubrospinal, the reticulospinal, the vestibulospinal and so on. They do not end directly on the anterior horn cell. They, with their fellow, the corticospinal tract, end along interneurones in the so-called internuncial pool, where they are met by certain synaptic resistances. As a result there is a smoothing of the neural impulse with finally a gradual feeding-out to the anterior horn cell. Even the last is not a simple system. The anterior horn cells

are made up of large fibers and small ones, the so-called gamma loops, all of which contribute to smooth motion and muscle tone.

This comparatively uncomplicated description pertains only to the wiggling of one finger. Think of how elaborate the brain mechanism must be in what we subsume under the general term "behavior." Think of all the activity that goes on in our brain, asleep or awake. The number of circuits are infinite, the cortical and cortical-associational group; the diffuse thalamic projection system with its feeding out of all of the somatic-sensory and viscero-sensory impulses; the reticular-arousing system which enables us to stay in the state of wakefulness or consciousness; the limbic system with its role in the handling of feeling experiences, emotions—actually a storehouse of previous experiences and "what to do about them." Add to these the autonomic nervous system and the neural humoral system, the brain in relationship to glands like the hypophysis, thyroid, adrenal, and the like. All combine into a very complex dynamic network with feeds into and feeds back; there is an intake and an output. These internal communication circuits are loaded with engrams, neural pictures of life's experiences, all functioning at different levels of awareness, and each pattern is highly individual.

I think that the concept of level of awareness needs a bit of elaboration. For example, all of you are watching me and listening. Now that I call it to your attention, you become aware that your lumbosacral region is pressing into the back of the seat. Certainly this part of you with a pressure of 100 pounds was feeding signals into your nervous system, but these were coming in at a certain level. The signals were being filtered by the reticular formation of the brain stem which sorts information exactly as a digital computer combs data, but the former is much more complex than our most elaborate electronic analyzers. Were we not to have this sorting system, we would be overwhelmed by stimuli coming from without. We simply could not handle the flood of impulses pouring in to us through every sensory modality. Suppose there were a splinter in your seat and it was digging into your skin. Certainly this new signal, which is coming in at a different intensity, would reach consciousness whereas sitting in a smooth comfortable chair does not reach awareness until I call it to your attention. This gives you an idea of the differential which can occur in one system alone, the reticular formation of the brain stem.

I review this, not to throw out large doses of neuroanatomy and neurophysiology, but to give you an idea of the complexity involved in the evaluation of a drug, if we are to have a true understanding of it. Into this elaborate mechanism of wires, relays, subcenters, we throw a chemical substance—alcohol, barbiturates, bromides, tranquilizers—and we say, "The drug acts on the brain." Where on the brain? Are all brains the same? I have already mentioned that the engrams are as different as are people. Therefore, five men at the bar, with five anatomically similar brains, but with five dissimilar sets of life experiences, have five different reactions to the same drug. The fundamental action of any of these drugs, be they alcohol or reserpine, is the depression of part of the circuitry of the brain. The result is release, and what is released is that which is available. In short, the drug pulls the lid off the Pandora box of the nervous system and whatever is contained in that box proceeds to tumble out. All lids do not come off the same way. The one that is drawn back by barbiturates, which depresses high cortical activity and produces sleep, is quite different from that removed by the tranquilizers which work through the reticular formation and which, in ordinary doses, do not affect high cortical activity.

Dosage is another factor. A small dose of alcohol, by depressing cortical associational circuits that participate in the process of anxiety, tension, and the like, release the person, so to speak, so that functionally he is better. We have proved this recently in our laboratory. However, larger doses slow down reflex activity, interfere with motoric execution, impair judgment, and finally scramble the entire cerebral response.

One cannot evaluate drugs in human beings without taking into consideration the so-called placebo effect. In late 1955, an interdisciplinary team of a psychiatrist, an internist, and an anesthesiologist at Northwestern University Medical School performed a carefully designed experiment on "The Effect of Rauwiloid on Preoperative Anxiety." Thirty patients on the surgical service were selected at random. Operative procedures to which they were to be subjected varied from varicose vein ligation to abdominal-perineal resection. Most of the patients required general or spinal anesthesia, although five were operated under local. Rauwiloid was given six days prior to surgery in a concentration of 6 mg. per day. Half of the patients received the active drug; half were given an identical, but bland, pill prepared by the same pharmaceutical house. Neither the doctor, the nurse nor

the patient had any idea of exactly what was being administered, a true double-blind experiment. The code was broken at completion of the study. Each patient's self-assessment was evaluated. He was interviewed by the psychiatrist at six days and one day before and one day after operation. He was also interviewed regularly by the nurse and anesthesiologist. The observations of the last two were either anecdotal or so deviant that they could not be utilized for integration into final results. Data on twenty-nine patients of the thirty could be quantified at the end. One patient had to be canceled from the experiment because of marked blood pressure fall. There was absolutely no difference between the two groups, between those receiving the active drug and those taking the inert substance. The patient whose blood pressure dropped precipitously was taken off the medication at the insistance of the chief of the surgical staff. When the study was ended it was discovered that this particular patient had been on the placebo. It was interesting that in the placebo group, two patients had a significant drop of blood pressure, ten remained unchanged and two had an increased blood pressure.

A striking aspect of the outcome is that twenty-eight out of thirty patients, by their own rating, considered themselves improved by the medication. This was in comparison with patients who were not in the experiment. Since the sole difference between this group of patients and any other thirty patients in surgery was the fact that there was a high level of communication between patient and doctor, the only conclusion that could be reached was that the subjective improvements in the patient resulted from patient-doctor relationship. The placebo was merely part of the language of communication. It would seem that all patients got an idea from general contact with the doctor, although not expressed overtly by the latter, that they were being handled in a way to alleviate their preoperative anxiety. In this relationship they obtained information about the nature and timing of the surgery. This was very reassuring to all of them and was apparently the most effective therapeutic agent in the test.

This experience is not new. Studies by others would indicate that placebo effects are not imaginary, nor are they results of suggestion. The investigations of Stewart Wolf have been particularly revealing, and his conclusions would indicate that the responsible mechanism for placebo responses is connected with circuits in the cerebral cortex. All placebo experiments, in order to eliminate suggestion, must be blind because the physician, too, must not know whether he is giving a strong drug or a control. Thus, one of Doctor Wolf's favorite examples is that of a patient who had suffered from chronic asthma for twenty-seven years with almost continuous attacks for seventeen. He had been a useful subject on whom to test new drugs. Finally a product of a pharmaceutical house seemed to be effective. When he was given the agent he was free of asthma; when it was stopped the asthma returned. When the doctor substituted a placebo without the patient's knowledge, the asthma was not relieved. Shifts from agent to placebo, and from placebo to agent, were carried on several times with consistent results, always in favor of the agent. When the company was approached for an additional supply of medication, their representative acknowledged that they had had so much trouble with positive enthusiastic reports that in this instance they, too, had sent a placebo. The doctor knew nothing of it, nor the patient, who was doing beautifully on a bland substance even though he failed on the doctor's own placebo. Apparently the latter was presented in some manner by the doctor which may have left the message that it was an inert substance.

In late 1942 and early 1943 during World War II, I met the best "tranquilizer" that I have even encountered, a young nurse who had a remarkable ability to put a ward of anxious soldiers to sleep. This young woman, who we may call Miss R., never used drugs. She became the toast of the Fifth Army; her reputation spread rapidly, and at night in our ward I would always hear the call, "Miss R., come tuck me in; Miss R., come straighten my pillow," and this she would do. She would tighten a blanket, she would fluff up a pillow, she would tuck a soldier in here and there, she would pat one man on his seat; she might lean over and give another man a light kiss on his cheek, at his request, and in a short time, thirty or forty men would be sound asleep. Not dreaming of battle, but dreaming of Miss R. I am sure.

This tranquilizing of people by a loved one or by some symbol is as old as man. Who among you has not heard the call, "Mommy or Daddy, come tuck me in," and when that act is completed, little Bobby, who has been bouncing all over the bed, goes to sleep. How many times have you seen an older child, even in late adolescence, call down as you open your house door at midnight, "That you, Daddy? Good night." He will admit to you the next morning that he could not sleep until you got home, but the moment you

opened the door he became drowsy and was able to fall asleep. How many devices are used for tranquilization—hot milk, Ovaltine, a bunch of grapes, even crackers.

The question then arises, "Shall we use drugs?" and the answer is, "Of course, where the situation demands it." Certain general rules must be kept in mind. Aging brains, for example, do not tolerate powerful sedatives well. These produce confusion. Clow has shown that if 100 confused, psychotic old people are placed in a good hospital setting which is friendly and considerate of all their physical and emotional needs, given reassurance repeatedly and taken off all drugs, I repeat, *all drugs*, at least 60 per cent will clear. An old person who becomes confused at night is much better off with a 15-watt baseboard light which enables him to orient himself if he awakens at 2:00 in the morning to go to the toilet, than with a drug to knock him out so that he will sleep all night. A drug only adds a daytime confusional state to the nighttime sensory deprivation bewilderment. Certain drugs, like seconal and nembutal, when taken in large doses over a long period of time, may have a dangerous sequel. If the individual is suddenly taken off medication, he may develop a withdrawal syndrome, with convulsions and psychosis. I have seen this many times, and the condition was recently described by Harris Isbel of the United States Public Health Service at Lexington Hospital for the Narcotically Addicted. One has only to see the effect of large doses of barbiturates on the electrocorticogram to realize that a disturbance in brain rhythm may ensue when, after prolonged intake, the drug is suddenly discontinued. If a patient has a convulsive diathesis and he is on large doses of phenobarbital, the sudden removal of the drug may cause him to go into a status epilepticus. In short, the barbiturates, while commonly used, are not entirely benign. Bromides in large doses may produce intoxication and descriptions of this state go back to the middle of the 19th century when the drug-induced confusional state simulated the then-common general paresis. Many a diagnostic error was made by the unwary. We still see bromide psychosis not infrequently, because substances containing bromides may be sold over the druggist's counter.

The effect of the drug depends on the level of the symptom to be relieved. If a patient starts with intense pain, morphine is about 75 per cent effective. A placebo given that patient is about 35 per cent effective. In other words, the placebo equals 50 per cent of our most powerful drug, morphine. If the patient has only moderate pain, morphine is about 52 per cent and a placebo is only about 40 per cent effective. As the pain becomes less severe, the placebo benefit drops to 29 per cent. If a patient is very anxious, any drug is about 60 to 70 per cent effective and the placebo ranks close to this figure. A large wound in a soldier, his safe ticket home, is often a powerful tranquilizer. He complains of no pain, he does not ask for drugs. Weeks later, with the wound almost healed, and the prospect of return to duty looming, anxiety and sleeplessness set in. He begs for sedatives for the day, sleeping medication for the night.

Therefore, where do we stand with these so-called tranquilizing drugs—the reserpine group, the phenothiazine derivatives, the meprobamates? I shall not even begin to attempt to review the literature on these. Two years ago there were almost 6,700 articles written on chlorpromazine alone. There have been many symposiums on these drugs—those of the New York Academy of Science, the American Association for the Advancement of Science, the Association for Research of Nervous and Mental Diseases, and the International Conference in Psychiatry in Zurich, Switzerland, 1957. Their mode of action has been described in these publications and I believe that it is worthwhile owning these books so that references on the important experimental work going on in this field are available at hand. It is essential to keep in mind that these drugs may exert their clinical effects of quieting or tranquilizing without the severe depression or the heavy sedation characteristic of other drugs, like the barbiturates or opiates. Some of the hyper-reactivity of the tense or anxious patient may be due to excessive transmission of sensory information along neural pathways without effective selection or control. Drugs like chlorpromazine, by increasing reticular input and conduction and thus enhancing this remarkable filtering mechanism that I have described, may act to reduce the inflow of information which is of no importance to the organism and which serves only to disturb.

On the other hand, such drugs should not be used arbitrarily only to control a symptom. A patient who is vomiting should not be given chlorpromazine to control vomiting without going about learning why he is vomiting. I have seen several instances of brain tumor where the vomiting caused by the neoplasm was treated with this drug and no systematic attempt made to learn the cause for the symptom. On the

other hand, the post-occipital muscular pain called "headache" by the person who is under tension, yields much more effectively to meprobamate than to codeine. A hypotensive patient who is tense and anxious is much safer with reserpine than with chlorpromazine which may augment the blood pressure drop; but the patient with an agitated depression may do better on chlorpromazine than on reserpine because the latter has been known to precipitate or aggravate latent depressions. Chlorpromazine in large doses may produce a Parkinsonian-like state, but this is easily reversed by stopping the drug, and one should always keep in mind that among the phenothiazines, chlorpromazine is the most likely to produce liver damage and jaundice.

One cannot pick up an article on the tranquilizing drugs without reading their effect on psychotic patients, that tremendous group of neglected people who fill more hospital beds than all other patients combined. Many of you have read reports like the following: "In this study of the effects of the drug, eighty-five patients were treated; 50 per cent showed a decided improvement and 75 per cent benefited to some extent."

This report is not describing chlorpromazine or any of the other phenothiazines; it is not describing the results of reserpine or any of the rauwiloid products; it is not describing meprobamate. This is a 1926 report in the *American Journal of Psychiatry* on the use of bromides in psychoses in a State hospital. I have seen similar reports in mid-nineteenth century French and German literature on bromides and opium.

We may properly ask then, "Has anything new been added?" and the answer is a categorical "Yes." In the past ten years we have become familiar with a large group of drugs which enable us to handle many conditions which heretofore we had treated with more sedative, more depressing, more hypnotic, and more confusing drugs. Our patients are clearer now and are able to go about their business more effectively. Yet the very volume of the drugs that are sold frightens one. Too many patients start with a doctor and then continue treatment on their own. They obtain the drug over the counter or by prescription and take more and more until they reach tremendous doses. I have seen dosages up to 4,000 mg. of chlorpromazine daily. I learned that some patients admitted to the psychiatric unit at Bellevue Hospital in New York have gone up to 11,000 to 12,000 mg. I heard of one instance in Texas, which is never to be outdone, where a patient was taking almost 15,000 mg. daily!! Too many patients are prescribing these drugs on their own. There are dangers, there are limitations, and the proper precautions should be established. Similarly, there are many instances where a doctor dealing with a functional problem handles the symptoms through the use of a tranquilizing drug rather than sitting down with the patient and learning what is causing the anxiety. This sets up the vicious cycle of making the patient dependent on a drug and does not ever come to grips with the basic emotional difficulty underlying the symptom.

Therefore, to summarize, the tranquilizing drugs are very useful and, comparatively speaking, are safe. They are not miracle drugs, our newspapers and lay magazines notwithstanding. They are therapeutic substances, and thus are welcome in our medical armamentarium. They are to be employed in symptomatic treatment; they are not curative of specific conditions in the sense that quinine can be used for the cure of malaria or penicillin in pneumonia. They merely handle the disturbance in the neural communication system. They are useful in that they render the patient more available for approach by the physician who can better communicate with the patient and get to the underlying cause. In short, these drugs are tranquilizers, facilitators, but they are never a substitute for a full doctor-patient relationship.

Love of Country

"It is of infinite moment, that you should properly estimate the immense value of your national Union to your collective and individual happiness;—that you should cherish a cordial, habitual, and immovable attachment to it, accustoming yourselves to think and speak of it as of the Palladium of your political safety and prosperity; watching for its preservation with jealous anxiety; discountenancing whatever may suggest even a suspicion that it can in any event be abandoned, and indignantly frowning upon the first dawning of every attempt to alienate any portion of our country from the rest, or to enfeeble the sacred ties which now link together the various parts."—GEORGE WASHINGTON

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INFECTED
LACERATION
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in 3 days...
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to school...
closure advanced[1]

THROMBOPHLEBITIS
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in a week after
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Current Research Concepts In Schizophrenia

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SCHIZOPHRENIA, one of the most serious and prevalent of the mental illnesses, remains in many ways a disease of speculative theories. The clinical definition of this illness or syndrome is still open to considerable debate among psychiatrists, and the problem of establishing an etiologic basis remains even more elusive. The illness has remained an enigma despite much basic research concerned with underlying pathophysiologic and psychodynamic mechanisms as well as the empirically-oriented treatment research. Many disciplines have been concerned with research in schizophrenia, such as genetics, biochemistry, physiology, psychology, sociology, anthropology, epidemiology, psychoanalysis, and clinical psychiatry, but in their intensive scrutiny of the disturbance much confusion continues to exist. Many investigators believe that schizophrenia is a final common pathway related to a number of etiologic factors. Others postulate that the majority of schizophrenic patients may fall into a unitary concept of illness with an as-yet-undiscovered primary cause.[1]

One of the most impressive aspects of the schizophrenic illness is the patient's sensitivity to stress, particularly of an interpersonal nature. Many of the symptoms of this illness such as withdrawal, social isolation, autism, and paranoid projection can be viewed as defenses against such stress. The affective dissociation, regarded by Bleuler[2] as one of the fundamental symptoms of the illness, appears to have the significance of obtaining an emotional isolation from human experiences, particularly those which may have any stressful significance, real or symbolic. With the occurrence of stress, an associational breakdown characterized by disturbed patterns of thought and verbal expression readily becomes apparent. Internal stimuli may be projected into the outside world and experienced as hallucinatory phenomena. The pathologic mechanisms involved in this increased sensitivity to stress require continuing investigation with new research approaches.

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Sociocultural Studies

During the late eighteenth and the nineteenth centuries there was a tendency to relate the incidence of mental disorder to the degree of civilization and to idolize the life of the primitive as being free from disabling psychic disorders. More recent investigation has concerned itself with the discovery of differences in the incidence and form of mental disorder in various cultures, and has attempted to relate such differences to social and cultural factors. In any one culture these differences may be relatively small, and, therefore, their effects on mental health elusive. By studying many different cultures of tremendous variation in pattern throughout the world one may note differences in the incidence and form of mental disorder. The results of such studies have considerable social, cultural, and therapeutic significance.

Early during this century Kraepelin[3] directed his interest toward comparative psychiatry to determine if dementia praecox were a disease of civilization and its unpleasant accompaniments. He gathered data from psychiatrists over the world and concluded that the disorder was not related either to race, climate, food, or any general circumstances of life, and contended that it was basically a biogenetic disorder. Other early studies made by anthropologists on mental disorder (and particularly schizophrenia in primitive cultures) emphasized that there was little or no evidence of such disorders.[4-7] Nearly all subsequent studies[8-16] have described manifestations of schizophrenic behavior among primitive peoples. On the whole, schizophrenia is the major functional psychosis recorded among all populations, non-literate and literate alike. However, schizophrenia does tend to be poorly defined clinically among primitive peoples and the thought content varies from one culture to another. The Bantu schizophrenic patient[17] has delusions of being poisoned and bewitched, auditory and visual hallucinations with predominantly mythologic content, and delusions of grandeur in being a chief or witch doctor. In the Western culture during the sixteenth century, it was not uncommon for the schizophrenic

person to feel possessed, visited by an incubus or succubus, or tortured by the devil and witches. Present-day schizophrenic patients from Western societies are concerned about influences through telepathy, electricity, radioactivity, television, and spying from the F.B.I. or the Communists. Much magical and religious content may also be present, but related to particular cultural and social patterns that the patient has experienced.

The interesting study by Goldhamer and Marshall[20] on the incidence of functional psychoses in Massachusetts over the past 100 years appears significant in terms of cultural changes occurring during this period and their possible relationship to mental disorder. From their study they concluded that there was no increase in the incidence of functional psychoses in the past century. The disparity in admission rates between the nineteenth century period and the present day depend on the larger number of psychoses among people in the older age groups rather than an increase in the incidence of schizophrenia.

A number of pertinent ecologic studies[21,22] on mental disorder have been made on our society; there is agreement that high rates of schizophrenia are concentrated in the center of the city and decline in all directions toward the periphery. Characteristically, the central areas show a greater amount of lowered social and economic factors. This is in contrast to manic depressive illness where rates are more evenly distributed throughout geographic regions.

Many methodologic problems have been demonstrated by all the studies in this field.[23,24] A number of variables are involved in mental illness in any culture. First, there is the need for definition, location, detection, and diagnosis of the illness. The course of the illness, whether acute or insidious, and age and sex factors may influence incidence figures. The presence or absence of treatment facilities is important, and incidence figures may be exaggerated by neglect. The social class of the individual should be specified; also the folklore myths and rituals of the particular culture and the attitudes toward mental illness in the community are important.

From these studies one can conclude that schizophrenia is a universal illness and, characteristically, the most common functional psychosis among all cultures. The incidence figures for this illness throughout the world are inconclusive and many methodologic problems will have to be solved before definite valid rates will be available. The fundamental symptoms of schizophrenia are the same throughout the world. Accessory symptoms such as delusions and hallucinations vary from one culture to another, and are often involved in the magico-religious thinking of the society.

Psychodynamic Factors

Psychodynamic studies remain fundamentally oriented as an extension of the principles of psychoanalysis. Freud early realized the significance of psychodynamic factors in the genesis of schizophrenia, which he first reported as a disturbance of libido function in his famous paper on Schreber.[25] Here he reported that an unconscious homosexual conflict leads to the use of the paranoid projective mechanism. Later Freud[26,27] emphasized the occurrence of ego breakdown and disintegration in schizophrenia; many of these concepts were further elaborated by Federn[28] and others.[29,30] Sullivan[31] and Fromm-Reichman[32,33] concerned themselves with the severe interpersonal traumata experienced by the schizophrenic early in life. These traumata result in subsequent inability to establish relationships with other people because of the patient's overwhelming conflicts related to hostility and dependency. Early in the life of the schizophrenic individual, experiences of warp and rejection are significant in producing intense conflicts of dependency and aggression. Weak ego development and autistic self-depreciation result. These writers have emphasized the communication aspects of these conflicts in the manifest content of schizophrenic symptoms.

Increasing interest has been paid to the impact of the early mother-child relationships on the development of the personality. Spitz[34-36] has clearly shown that a disturbed early relationship, particularly the absence of the mother or a maternal figure, has an overwhemingly disastrous effect upon the psychologic as well as physical development of the child. If mothering does not occur, the child is much more susceptible to any physical illness and may later show learning difficulties or even mental deficiency. It seems apparent that sensory stimulation and close maternal care are necessary for the development of the personality.[37] These observations have not demonstrated that schizophrenia develops from these particular parental relationships, but certainly imply that such factors may have a very disastrous effect upon the development of the individual.

The body image and its relationship to both normal psychologic functioning and psychopathology has been the subject of serious scrutiny.[38] A constantly maintained, correctly interpreted, interoceptive sensory in-

put would seem essential for accurate evaluation of reality. In the development of psychoanalytic concepts of schizophrenia, Federn and Schilder placed central emphasis on disturbances in the body image as being the core of the schizophrenic process. Following their example, three English psychoanalysts[39] observed a ward of chronic schizophrenic patients over a period of many months. The patients' confusion about identity was clearly evident, as illustrated by their inability to distinguish where their body boundaries ended and those of other people began. Their fears of being swallowed up by and fusing with other persons were often expressed and were interpreted as being related to their lack of body definition. Fisher and Cleveland[40] reported a study comparing a group of chronic schizophrenic patients with normal subjects and with patients suffering from rheumatoid arthritis. From psychologic test indices they constructed a "barrier score" which referred to body boundary delineation. Chronic schizophrenic patients characteristically had low barrier scores. Studies of the effects of sensory isolation[41] and psychotomimetic drugs[42] which inhibit, facilitate, or scramble sensory input have clear relevance to this phenomenon.

Several interesting and carefully conceptualized studies of schizophrenic patients and their families have been made by the Mayo and Yale groups. In the Mayo study[39-40] twenty-seven schizophrenic patients and their families were studied by collaborative research in which extensive work was done with the patients and their parents. It was found that the schizophrenic patient was exposed repeatedly to a number of severely traumatic and overwhelming assaults of a sexual and aggressive nature by the parents. The severe traumata impaired personality development, and in response to subsequent precipitating factors, many of the developing symptoms (such as delusions and hallucinations) represented in a striking way the assaultive behavior of the parents. They conclude that in schizophrenia there is an introjection of the hostile parental aggressor by the patient with attempts to repress and deny the importance and meaning of the parents' behavior. As the illness becomes overt there is a projection of this feeling onto the outside world and a reliving of the earlier conflict.

Multiple techniques have been used by the Yale investigators[46-51] in an effort to recreate the personalities and the atmosphere of the family groups of schizophrenic patients. To carry out this research, repeated interviews and psychologic tests on schizophrenic patients and members of the family have been done. Not one of the families has been well integrated. It is interesting to note that 60 per cent of the patients had at least one parent with mild schizophrenic or clearly paranoid symptomatology. Chronic alcoholism, severe obsessive compulsive neurosis, passive dependent personality disturbances, and other gross psychopathology were common familial problems. Many distorted relationships occurred within the family setting. Irrational intrafamilial systems of communication occurred that distorted or denied the intermittently valid interpretations of the environment. Marital relationships were all seriously disturbed and there were repeated threats of separations, coercion of one parent by the other, interrogation, and criticism. Imitation of irrational parental behavior and partial identification with the dominant parent appeared to play a significant role in the development of accessory symptoms. It is the impression of this group that the basic schizophrenic process is a reflection of the abnormal family organization. Schizophrenic symptoms may represent developmental failure in personality organization as much as disorganization in the sense of regression.

These studies demonstrate the significance of the role of early psychodynamic factors in the development of schizophrenia. To what extent these factors represent the primary etiology of the illness at present is difficult to say. Similar factors are seen in the development of other mental disturbances, but the intensity of such conflicts may be greater in schizophrenia.

Genetic Factors

A hereditary aspect in schizophrenia has been emphasized for a number of years. It is only with the recent work of Kallmann[52-54] and Slater[55] that evidence implicating the genetic factor has been presented. Kallmann has studied families of schizophrenic patients and schizophrenic twins. His conclusions are that children born of one schizophrenic parent have a 16 per cent probability of developing schizophrenia and the children of two schizophrenic parents, a 68 per cent probability. Siblings of schizophrenic patients have a 14 per cent probability, while the probability for two-egg twins, when one is already schizophrenic, is 16 per cent. Among one-egg twins, when one has the disease, the probability that the other twin will develop it is 86 per cent. Morbidity, therefore, consistently increases with the increase in the closeness of the blood relationship. Kallmann has stated that schizophrenia is probably related to a mutant recessive gene which may cause some type of specific enzyme deficiency. He has stated that his genetic theories do

not explain schizophrenia in its totality and that psychologic factors interacting with the genetic factors may be very significant. Slater believes that a number of genes of small effect, half of which are common to any two brothers or sisters, play a significant role in the production of schizophrenia. The greater the genetic penetrance, the less the need for external or environmental factors in causation. The lesser the genetic penetrance, therefore, the greater the need for external environmental factors in producing the illness. At the present time, however, from the available data it seems premature to talk about biochemical genetics of schizophrenic illness. If such biochemical defects having a genetic basis can be found, the hypothesis concerning the genetics of schizophrenia can then be more clearly defined. At present much is questionable about the work and further investigation is necessary.

Biochemical Factors

Intermediary carbohydrate metabolism has had recent emphasis in biochemical studies of schizophrenia. With the development of new techniques in the use of radioisotopes, intracellular phosphorylation has been extensively studied in the schizophrenic population. In 1955, Nagy and Gerty[56] reported differences between normal subjects and schizophrenic patients in intracellular phosphorylation after they were stressed with insulin. The Lafayette Clinic group[57-60] postulated that there was an energy deficit in schizophrenia and measured the specific activity of adenosine triphosphate (ATP) in a control group and a schizophrenic group. The resting rate of ATP turnover in the schizophrenic group was greater than in the normal group. After being stressed with insulin, the specific activity of ATP in the schizophrenic group was reduced while among the normal subjects it increased adaptively to meet the stress. With the use of labeled glucose these investigators have demonstrated a blocking of the control of the hexose-monophosphate shunt in schizophrenic patients, indicating that again under stress the schizophrenic patients cannot shift from the synthetic to the high energy or Emden-Meyerhof part of the cycle to meet their need for increased energy output. Thus a basic defect in energy mobilization has been demonstrated, which may explain the often-reported inability of the schizophrenic patient to meet stressful situations. These findings should be evaluated cautiously inasmuch as they may well be secondary to the prolonged inactivity and withdrawal or irregular dietary habits associated with the disease rather than being etiologically significant.

Much excitement occurred when Akerfeldt[61] announced that the blood of schizophrenic patients oxidized N'N-paraphenylenediamine more rapidly than normal blood. This was presumably related to increased oxidase actively associated with elevated levels of the copper-binding globulin, ceruloplasmin.[62] Abood and his co-workers[63,64] also reported that when normal subjects were given hallucinogens their ceruloplasmin levels (as measured by oxidase activity) rose, apparently in an effort to detoxify the substance. The Tulane group[65,66] stated that ceruloplasmin was high in schizophrenia as a defense against the disease and that those patients with the best prognosis had the highest levels. Tempering enthusiasm about the significance of ceruloplasmin and the increased oxidase activity of schizophrenic blood is the fact that the Akerfeldt test is highly dependent upon blood ascorbic acid.[67] When schizophrenic patients are placed upon adequate diets with vitamin supplements, their Akerfeldt test cannot be distinguished from the normal. In addition, Goodman and his associates,[68] utilizing a more precise immunologic technique, discovered that ceruloplasmin in schizophrenia was neither higher nor lower than that of normal controls and other patients with a variety of physical diseases.

Neurophysiologic Factors

Abnormalities in the electroencephalogram of schizophrenic patients, ranging from slow dysrhythmia to high frequency low amplitude records, have been described by a number of investigators,[69-73] and are said to be found in 20 to 80 per cent of all patients. However, other studies show no more deviations in the EEG than would be expected in a normal population. Depth electrode studies by Heath[76] and Jacobsen[77] purport to show paroxysmal spiking, particularly in the septal area of the brain of the schizophrenic patient. Whether these findings represent artifact of electrode placement remains to be determined. Rodin and his co-investigators[78] described a group of patients with schizophrenic symptoms who manifested temporal lobe spiking on their electroencephalograms. They suggested that a new diagnostic entity, temporal lobe schizophrenia, be established. The discovery of the reticular activating system by Magoun[79-81] led to a rash of premature conclusions that this exceedingly important area concerned with the maintenance of alertness, attention, and the control of afferent inflow was somehow involved in the schizophrenic deficit. Nothing experimentally conclusive has been demonstrated.

The Model Psychoses and Sensory Isolation

The experimental production of schizophrenic-like symptoms, primarily with psychotomimetic drugs, has drawn increasing interest. DeJong initially used this technique to produce catatonia in animals using bulbocapnine in 1929.[82] Mescaline[83] has long been known to cause a severe delerioid psychosis with a resemblance to schizophrenic-like phenomena. Research in this area received considerable impetus with the discovery of lysergic acid diethylamide (LSD 25) which in microgamma amounts produces a thought disorder associated with visual hallucinations of fantastic quality.[84-88]

That a compound chemically similar to many naturally occurring amines could in physiologic amounts cause severe perceptual disturbances led to speculation that inborn errors of the metabolism of these amines (adrenalin, serotonin, and noradrenalin) might be related to schizophrenia. Comparisons were made between schizophrenia and a known disease of amine metabolism, phenylpyruvic oligophrenia; Hoffer and his group[89-91] proposed that in the schizophrenic patient adrenalin was degraded to the hallucinogen adrenochrome. They have reported high levels of adrenochrome in the serum of schizophrenic patients but this has not been substantiated by other investigators.[92]

Because LSD blocks the effects of serotonin on peripheral receptors, Wooley and Shaw[93] theorized that its ability to produce psychosis was dependent upon serotonin inhibition. Brom-LSD, however, has the same effect upon serotonin without its psychotomimetic qualities, raising a serious question about the validity of this hypothesis.[94] Studies of the effect of LSD on certain psychologic variables, carbohydrate metabolism, and synaptic conduction have failed to demonstrate its mechanism of action.[95] Crucial to the problem would be the understanding of how the psychotomimetic drugs either facilitate or block interoceptive or exteroceptive sensory input.

Recently a new schizophrenomimetic agent was discovered which seemingly has bridged the gap between drugs and sensory isolation as producers of experimental psychopathology. Sernyl 1 (1 phenyl cyclohexital) piperidine monohydrochloride was initially used as an anesthetic by Greifenstein until he, together with Meyer,[96] observed a high incidence of postoperative psychoses. It was studied as a psychotogen by Luby and his associates[42] and was considered to reproduce the primary symptoms of the schizophrenic process. Its mechanism of action has also remained obscure, yet it seems likely that the blocking of sensory input, particularly that associated with proprioception, has an important relationship to its psychotomimetic properties.

Sensory isolation as a procedure for inducing disturbances in thinking and emotionality was developed by the McGill group.[97] Alterations in body image, inability to sustain directed thinking, fluctuations in the experiencing of time and space, the evocation of affectively-charged personal experiences, visual and auditory hallucinations, and slowing of the electroencephalogram occurred in subjects under sensory isolation for twenty-four to forty-eight hours. Lilly[41] described a profound psychotic-like experience when he remained submerged in water at body temperature for a two and one-half-hour period. Patients with bulbar polio placed in respirators have been observed to have hallucinations of a particularly compelling nature involving kinesthetic, visual, and auditory modalities.[98,99] These patients demonstrate the importance of kinesthetic input, emphasized even more by the fact that the effects of sensory isolation can be dispelled more quickly with movement than anything else.

The Toxic Substance

The search for the toxic substance, postulated by Bleuler and Kraepelin, has been renewed during the past ten years after falling into disrepute with the development of psychodynamic concepts of schizophrenia. The Tulane group has reported the extraction from the serum of schizophrenic patients a substance, presumably protein, which they call "taraxein.[100,101]" When injected into volunteer controls, a psychotic response ensues, characterized by difficulty in thinking and depersonalization. When given to monkeys with electrodes implanted in the septal area, they show behavior resembling catatonia and develop slow waves in their EEG's. It should be mentioned that other centers in this country have not been able to duplicate this work,[102,103] although Swedish[104] groups have reported experimental success with taraxein. Rather than being a simple protein it would seem that taraxein is a mixture of as-yet-unrefined globulin components. Winters and Flataker,[105] using whole serum, found that rope-climbing rats lost their agility when injected intraperitoneally with serum from schizophrenic patients.

Plants and tissue cultures have been incubated with this material in an attempt to assay growth inhibition or acceleration. The results again have been controversial.[106] Luby and co-workers[107] so far have been

unable to demonstrate differences between schizophrenic blood and normal blood using several standard plant bio-assay tests exceedingly sensitive to the presence of indolic compounds. Federoff,[108] using cultures from strain L mouse cells, reported toxicity highest with the serum of schizophrenic patients as opposed to the serum of normal subjects and surgical patients. Similarly, Martin and Kost[109] demonstrated marked effects of schizophrenic serum on tissue cultures of HeLa cells, even suggesting that their technique might be used as a diagnostic test. Unusual indolic compounds have been discovered in the urine of schizophrenic patients with paper chromatography; McGeer and his associates[110,111] reported a number of unusual amines not found in normal urine. Cafruny and Domino[112] showed a decreased incidence of a hydroxyindole-like material in the urine of schizophrenic patients. The importance of diet in such studies cannot be overestimated, as evidenced by Kety's[113] observation that these so-called abnormal indoles are related to coffee ingestion.

Related to the toxic theory is the promising work of Bogoch[114] on spinal fluid neuraminic acid, a compound derived from macromolecular brain ganglioside. Schizophrenic adults were reported to have the same levels of neuraminic acid as seven-year-old children, strongly suggesting a biochemical maturational deficit. The function of neuraminic acid is unknown but it may be involved in the maintenance of the blood-brain barrier. Thus metabolites, which in normal subjects never pass this barrier, may find easier access to the schizophrenic brain and thus produce symptoms.

Summary

There are almost as many theories about the etiology of schizophrenia as there are patients. They range from the exclusively psychodynamic to the metabolic-genetic, with vigorous adherents of both. A unitary concept of the disease is being replaced by theoretic constructs which consider schizophrenia to be a "final common pathway" syndrome with multiple etiologies comparable in medicine to cardiac or renal decompensation. Sociocultural investigations have demonstrated comparable incidence rates for schizophrenia in primitive and Western societies. Research during the past decade has emphasized the role of pathologic family interaction in the development of schizophrenic symptoms. In particular, the transmission of irrationality from parents to children and the chaotic organization of the schizophrenogenic family have been reported. The twin studies strongly suggest a genetic mode of transmission with the exact mechanism as yet to be defined. Recent years have seen renewed interest in biochemical and neurophysiologic concepts of mental disease. The sensitivity of the schizophrenic patient to stress and his inability to adaptively increase his energy output has drawn increasing attention to intermediary carborydrate metabolism. A defect in the mobilization of adenosine triphosphate and in the control of the hexose-monophosphate shunt may occur. The attempts to isolate toxic substances such as "taraxein" or adrenochrome continue in many centers with conflicting and variable results. Study of the metabolism of the catechol amines has yet to show differences between schizophrenic and normal subjects.

It should be emphasized that the various hypotheses about the etiology of schizophrenia are not necessarily incompatible with one another. For example, severe interpersonal stress undoubtedly has many significant associated metabolic consequences. The period in the patient's life at which the stress occurs may also be critical. One cannot deny the genetic potentiality in each organism to master and adapt to stress. This may be reflected in both overt behavior and in biochemical processes. The grave error in research in schizophrenia may lie in an unwillingness to conceptualize research approaches as involving interrelations among many frames of reference—whether they be psychodynamic, psychologic, or biologic in nature.

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Education

"I grow more intolerant of fools as the years roll on. If I had a son, I was saying, I would take him from school at the age of fourteen, not a moment later, and put him for two years in a commercial house. Wake him up; make an English citizen of him. Teach him how to deal with men as men, to write a straightforward business letter, manage his own money and gain some respect for those industrial movements which control the world. Next, two years in some wilder part of the world, where his own countrymen and equals by birth are settled under primitive conditions, and have formed their rough codes of society. The intercourse with such people would be a capital invested for life. The next two years should be spent in the great towns of Europe, in order to remove awkwardness of manner, prejudices of race and feeling, and to get the outward forms of a European citizen. All this would sharpen his wits, give him more interests in life, more keys to knowledge. It would widen his horizon. Then, and not a minute sooner, to the University, where he would go not as a child, but a man capable of enjoying its real advantages, attend lectures with profit, acquire manners instead of mannerisms and a university tone instead of a university taint."—Norman Douglas in *"South Wind."*

Indications for the Use of Tranquilizer Drugs In Emotional Disturbances of Childhood

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THE PAST DECADE may well be recorded in history as *the tranquilizer era*. Without question, the widespread use of this group of drugs testifies to the impact they have had both on general medical practice and on psychiatry. There is no area anywhere in medicine where so much seems to be going on at one time, and where finding one's direction in establishing a rationale for treatment in the midst of the multitude of new drugs and barrage of literature becomes increasingly difficult. By this time, it has become increasingly apparent that these drugs do not constitute a panacea for the psychiatric ills of the human race. However, they have been demonstrated to be a major weapon in our therapeutic armamentarium in dealing with psychiatric disturbances both in adults and in children.

The place of the tranquilizer drugs in the treatment of emotional disturbances of childhood seems at this point much less well defined than it does with adults. In general, the tranquilizers have been less helpful with children than with adults. An evaluation of results with children is difficult because of the multitude of drugs that are currently available and the conflicting reports in various studies. So many of the reports have been uncontrolled or have been based on heterogenous diagnostic or symptomatic groups so that comparison of one drug to another is very difficult. Great variation in what constitutes an active dose for a child has further complicated things. More often it has become necessary to begin a child on moderate doses of a drug, increase it until undesirable side effects appear and then reduce the dosage in order to determine the optimum therapeutic level.

General Considerations

The intelligent treatment of childhood emotional disturbances with tranquilizing drugs requires that the physician be clearly aware of what he is treating and what the drug will be able to do, as well as what it cannot do. The physician's judgment is open to question when he prescribes such medication for symptomatic relief without having first thoroughly studied both the physical and emotional problems that the youngster presents and has at least some understanding of what is causing them. In almost every instance, the tranquilizers should be an adjunct to, and in no way a substitute for, psychotherapeutic help and needed environmental changes. It seems grossly unfair to give a child or his parents the idea that the child will need to take a drug of this sort for the rest of his life or to prescribe such with the idea that one always can hide the symptoms long enough for the emotional difficulty to be outgrown spontaneously.

It should be kept in mind that the tranquilizers are useful in most instances only when aimed at symptoms that are indicative of psychomotor acceleration, that is, emotional states and states of physical activity characterized by an increased rate of activity. This will mean then that, among the emotional disturbances, they can be of help in children with anxiety and, to a lesser degree, in children presenting problems of aggressive outbursts. They are not helpful, and, in fact, can be harmful when there is a state characterized by diminished or impaired emotional responsiveness such as withdrawal or depression. Likewise, considering changes in motility, these drugs will be effective in conditions characterized by hyperactivity or hypermotility and are not helpful where there is diminished, retarded, or impaired motor activity.

Clinical Situations

There are five groups of psychiatric disorders where the symptoms of anxiety or increased psychomotor activity are apt to be prominent. These include: (1) stress reactions, (2) anxiousness, (3) aggressive reactions, (4) psychosis, and (5) organic brain damage. In each of these categories (which are based more on symptomatology than diagnosis) drug therapy may be of great value at some time during their management.

The first of these, the stress reactions, are known in psychiatry by the rather elaborate term of transient

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situational personality disturbances. They refer to symptoms developed by a child who has a reasonably intact personality structure. Symptoms appear in response to some immediate situation or stress in the environment with the assumption that with the removal of this stress, equilibrium will be restored and the symptoms will subside. In many common everyday situations, such as a move from one house to another, a change of schools, an acute illness, or an admission to the hospital (particularly when this is for a surgical procedure), one is likely to encounter some sort of symptoms in the child, reflecting his anxiety over the new situation. Most of these symptoms are so mild as to really require no medication. Many of these events are planned for, such as admission to the hospital for a tonsillectomy, and on these occasions one should rely primarily on proper emotional preparation of the child and use tranquilizers only as an adjunct. A study illustrating the point was done recently at the Children's Psychiatric Hospital (at the University of Michigan).[4] The usefulness of chlorpromazine in preparing emotionally distubed children for a frightening and perhaps painful dental procedure was evaluated. The conclusion of this study was that the development of a friendly working relationship between the child and the dentist was more effective than the medication could be. A brief clinical example may illustrate a situation where drugs were useful.

Illustrative Case

Seen in psychiatric consultation was a ten-year-old boy who had been admitted to the hospital for skin grafting of burned areas on his legs. The boy's history indicated a reasonably good emotional adjustment and he had undergone his surgery without undue levels of anxiety. During the postoperative period which involved painful changes of dressing, the boy became increasingly apprehensive, was restless, had difficulty sleeping, and became progressively more belligerent toward members of the nursing staff—with this culminating in his biting a nurse when she came to change his dressing. After some discussion, the consultant was able to indicate to the boy the relationship of the aggressive behavior to his fears about the painful changes of dressing, and convey an understanding and acceptance of such fears. The one interview with the psychiatrist and the use of one of the tranquilizers were helpful in allaying the boy's anxiety and enabling him to cooperate better for the necessary medical treatment.

A second type of situation where these drugs may be indicated are those that could be characterized simply by the term "anxious child." There are rather significant differences in the way that children and adults handle their anxieties. This difference is one that sometimes even physicians who work with children a great deal will tend to overlook because they are thinking in terms of their own frame of reference. While many children can and do experience the subjective feeling of discomfort which adults have called anxiety, more often the child is not going to sit quietly with this uncomfortable feeling and just worry about it. Instead he will do something in response to it—this something involving hyperactivity or aggressive behavior. The child with anxiety that is severe may give one the impression that he is about to fly apart in all directions at once. He may be constantly on the go, moving from place to place, unable to settle down to anything very long, showing difficulty in concentration and usually showing an increased rate of speaking, called pressure of speech. His thoughts may jump from idea to idea quite rapidly also. Other children are so anxious that they are shy about saying much, especially in unfamiliar surroundings. Such children with extreme anxiety show their fearfulness in other ways. The very things they talk about are apt to be heavily colored by real or imagined fearful situations, such as a great concern with natural occurrences like thunderstorms or tornados. The parents, or perhaps the child himself, will report unusual and excessive fears of animals, high places and the like, and very often there is a history of nightmares or night terrors. The child seems to be aware of his anxiety and one sees evidences of attempts at control. The child will give the impression of struggling to maintain himself as if he felt he were sitting on a keg of gunpowder.

Many of these children are excellent candidates for psychiatric treatment and should be referred for such help if their symptoms do not respond quickly to other measures. The tranquilizer drugs become important here as they are able to interrupt the vicious cycle which is often set up. Many anxious, restless, neurotic children are overly sensitive to criticism and failure. Unable to function adequately because of their anxiety level, they find themselves (with increasing frequency) failing to handle school or play situations, all of this leading to more anxiety. Tranquilizer drugs may give the child better control over his tensions and enable him to do and feel better with his playmates, his schoolwork and his family—all things that will increase his gratifications and encourage his confidence in himself. If the physician's evaluation points to this kind of problem, he may well begin a trial of one of the tranquilizers in an effort to break up the vicious cycle. This would be

in addition to other therapeutic efforts, such as attempting to modify harmful parental attitudes. If the child shows no response after several weeks, the problem is probably more severe, and psychiatric referral should be considered.

Children with chronic aggressive reactions usually show manifestations of disturbance more intermittently. There are periodic outbursts of temper tantrums, sassiness, rebelliousness, or outbursts of explosive or impulsive behavior. The child with this kind of difficulty usually has a history of such behavior from his pre-school years and, in evaluating the home, one is impressed that the parents in their management of the child during his early years, have been either too demanding and punitive, too inconsistent, or have failed to make reasonable demands on the child. In talking with the child with this sort of difficulty, one often gets the impression that he seems to be "fighting back" at what he sees as unrealistic demands placed upon him. This sort of child is more apt to blame others for his difficulty and show poor tolerance for any sort of frustration. Other children within this group, however, particularly those who have had little in the way of demands and firm controls in their formative years, behave in a completely infantile and omnipotent manner, reacting quickly to any frustration and showing the attitude that the world is supposed to jump at their beck and call.

The tranquilizers are of limited value with these chronic aggressive children who are more deeply disturbed than those in the two groups mentioned above. Such drugs may be helpful in an emergency situation by quieting an agitated, destructive child. Inasmuch as anxiety is often a part of the child's symptom picture, a trial like that outlined for the anxious child is in order. Generally, the more uncomfortable the child, the more likely will he respond to such a program. Many of these children, unfortunately, do not respond to treatment approaches available to the family physician and will require referral.

Tranquilizer drugs have shown perhaps the greatest usefulness as an adjunct to the treatment of psychosis in childhood, particularly in the early stages. These children may be seen as acute emergencies presenting extreme agitation, fearfulness, and destructiveness. The response of these children to one of the phenothiazines, administered parenterally, is often dramatic and enables the child to be responsive to further psychotherapeutic and environmental help. A less acutely disturbed psychotic child frequently presents a picture much like that described above for the anxious child. Children in the early stages of a psychotic process are apt to go one of two ways. That is, they tend to either slowly withdraw into excessive fantasy, becoming quieter, more unobtrusive children, or they try to handle the impending break with reality by a number of neurotic mechanisms which have the character and appearance of those described for the anxious child. In the early stages, it is only the observation of the peculiar and disorganized kind of thinking that makes a diagnosis of psychosis possible. These children whose hold on reality is tenuous, and whose struggle to maintain control of their impulses requires tremendous effort on their part are often greatly helped in this endeavor with one of the tranquilizer drugs. Because of the chronic nature of their problems, they may require medication for a longer period of time.

Children with some types of organic brain damage show extreme degrees of increased motor activity, distractability, inability to concentrate, and impulsive behavior. While anxiety is a frequent part of the symptom picture in these children, it usually does not have the overwhelming and fearful quality that it does in the anxious or psychotic child. More often the child responds to it rather than feels it subjectively. Certain children in this group show improved behavior when on anti-convulsant medication. With brain-damaged children, the tranquilizers are of use as an adjunct to an over-all treatment plan that would emphasize, primarily, changes in the child's environment which would provide him more structure, stability, and freedom from excessive stimulation. In this way, the child is helped to develop his own controls and better compensate for his neurologic deficits.

Summary

This paper has tried to present a rationale for the use of tranquilizer drugs in the emotional disturbances of childhood based on, first, an accurate appraisal of the physical, emotional, and environmental factors producing disturbance in the child; and second, an appreciation of the symptomatic action of tranquilizer drugs. Several groups of clinical situations are described with the place of tranquilizers in the over-all treatment plan indicated.

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Some Problems in the Treatment of Emotionally Disturbed Children

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As PHYSICIANS, we are accustomed to approaching a problem by attempting to define and delineate the problem. Simultaneously we become acquainted with the person with the problem as well as their environmental setting. After exploring the roots of the problem in the past, we formulate a diagnosis and speculate about the prognosis. The foregoing is then used to outline a treatment plan.

Let us approach some of the problems inherent in the treatment of emotionally disturbed children in much the same way today. We shall begin by delineating the problems into (1) individual clinical ones, and (2) community problems.

As clinicians we invariably have the responsibility of deciding whether therapeutic intervention is indicated. We may be dealing with a predictable transient phase of development that would be indicative of psychopathology only in an older individual. For example, we expect two-year-old children to be somewhat phobic, but are concerned about the same symptom in a nine-year-old. Mild compulsive behavior in a nine-year-old might be of no more concern than phobias in a two-year-old.

We have to be able to adjust to the difference between the reasonable adult who may request assistance and the child who rarely wants help when he in fact needs it. We are most frequently consulted about emotionally disturbed children who upset those about them while feeling no discomfort themselves. Much less often do we have an opportunity to help the "too good" inhibited youngster who in reality may be more ill than the troublesome acting-out child.

If treatment is indicated, we have to choose between in-patient and out-patient therapy. The bulk of the out-patient treatment in Michigan is done in the eighteen child guidance clinics and their branches.* Most of the in-patient therapy is done in the six state hospitals**, the Lafayette Clinic in Detroit, Hawthorne Center at Northville, and the Children's Psychiatric Hospital at the University of Michigan Medical Center.

Regardless of the type of treatment offered the youngster, we generally have to help his family also. In fact, there are instances in which our efforts should be concentrated on the environment:

Illustrative Cases

John, at nine years of age, was the youngest of four children. His father was the chief of police in their community. His mother was a successful and contented homemaker. It was three months after John had started fourth grade that the visiting teacher at his school consulted me about John's classroom behavior. She related that towards the end of the first week of school John started to clown. This had progressed to the point where his immature and bizarre antics precluded any academic work for him and made it most difficult for his classmates. This was in marked contrast to his previously excellent adjustment. The visiting teacher was appropriately impressed by the fact that his behavior outside of his home-room remained acceptable. He continued to do well with his family, Cub Scouts, playmates and in school at gym, music and manual arts. The visiting teacher summarized by saying that he was wild only in the presence of his class-room teacher, who was described as a seasoned and respected teacher.

In a subsequent interview with John's teacher, I was struck by her interest in John's family. She had known and liked his older siblings even though they had always been in "the other fourth grade." She was pleased when John was assigned to her class because they were "such a wonderful family." Much later in the interview she inquired if John's behavior was not typical for the children of policemen. In drawing her out about this, she told me that her own father had been a one-man police force in her home

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This paper is based on remarks delivered at the Annual Dinner Meetings of the Grand Rapids Child Guidance Clinic, January 27, 1958, Muskegon Area Child Guidance Clinic February 5, 1958, and the Battle Creek Child Guidance Clinic, February 4, 1959.

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*Battle Creek Child Guidance Clinic, Central Michigan Child Guidance Clinic, Children's Center of Wayne County, Flint Child Guidance Clinic, Grand Rapids Child Guidance Clinic, Huron Valley Child Guidance Clinic, Jackson Child Guidance Clinic, Kalamazoo Child Guidance Clinic, Lansing Child Guidance Clinic, Macomb Child Guidance Clinic, Muskegon Area Child Guidance Clinic, Northwest Michigan Child Guidance Clinic, Oakland County Child Guidance Clinic, Petoskey Child Guidance Clinic, Port Huron Child Guidance Clinic, Saginaw Valley Child Guidance Clinic, Twin City Child Guidance Clinic, and Upper Peninsula Child Guidance Clinic.

**Kalamazoo State Hospital, Newberry State Hospital, Northville State Hospital, Pontiac State Hospital, Traverse City State Hospital, and Ypsilanti State Hospital.

town. She and her siblings felt their father's position precluded anything short of exemplary behavior. She recalled a persistent desire to rebel, the gratification of which she had successfully suppressed.

I tentatively suggested that it might be possible that she was *unconsciously* encouraging John's misbehavior and vicariously enjoying it. I asked her not to pass immediate judgement on this possibility. I proposed that she give it some thought in the interim before another interview.

At our next interview she greeted me eagerly, stating that she had examined my suggestion from every possible angle. She was sure it did not apply to her and John because since our last interview his behavior had changed so dramatically for the better.

George, aged seven started awakening several times a night shortly after his father, a soldier, was transferred. Initially their new physician felt that the move was upsetting and that his sleep would once again become restful after the passage of time. When this did not prove to be so after several months, the physician discovered that George, his three-year-old sister and one-year-old brother were all sharing their new apartment's only bedroom with their parents. At their previous home each child had an individual bedroom. The physician suggested that the parents sleep in the living room and the children share the bedroom. This environmental alteration resulted in relief of George's sleep problem.

In contrast to these two examples of environmental manipulation, most psychotherapy enables the child through the vehicle of *self*-understanding to further develop his potential. This is accomplished by liberating for more constructive use psychic energy that is expended in defending against fantasied dangers. The youngster is generally unaware of these unreal dangers, as well as his fear of them and his defenses against them. With the awareness that psychotherapy encourages, he can evaluate the usefulness of his defensive maneuvers and relinquish the unnecessary symptomatic ones. The medium of communication is the child's play as well as his verbalizations. The child gains support from the consistent understanding and accepting relationship with the therapist. (The Big Brother organization is an example of relationship therapy in pure culture. It is indicated for boys who are deprived of an opportunity to relate to an adult male.) Additionally, there are varying degrees of remedial educational guidance and opportunities for emotional release in most therapeutic undertakings. In a brief survey, it is impossible to detail an example of the usual sort of psychotherapy. Therefore, I will limit myself to an example of "release therapy" wherein the aim is exclusively the freeing of pent-up emotions:

Jane was a happy, well nourished three-year-old only child when her mother was confined for delivery. Although Jane was well cared for by her grandmother during her mother's absence, her appetite became finicky. After mother and the new baby came home, Jane ate less and less until her intake diminished to a few sips of milk a day. Concurrently, she manifested absolutely no signs of sibling rivalry. As her food intake had decreased, her sweetness to the baby and consideration for her mother had increased.

In view of her age and the acute traumatic onset of the anorexia, I decided to utilize release therapy. Instead of inviting Jane to play with toys of her choice as one would ordinarily do in psychotherapy, I directed her to play with specific toys, which I had previously selected. They were a little girl doll, a baby doll, mother doll, father doll, baby bottle, toy crib, and toy table and chair set as if for a meal. I had some cookies placed on the side.

Initially she did little more than look at the toys. Later she fingered them tentatively. In subsequent visits her play became increasingly animated. During the fourth visit she had the little girl doll attack the baby doll and smash the bottle. In the next visit the little girl doll also attacked the mother. While doing this, Jane reached over for a cookie. Her intake at home increased concurrent with this emotional release. Her behavior at home became less docile.

The magnitude of the broader community problems are best defined by recalling some statistics so well known that I doubt that we need recite them. No matter which we would select they would invariably underscore some frustrating experiences we have all shared. The availability of treatment for emotionally disturbed youngsters does not begin to meet the demand for help.

This overlaps with the second part of our approach —the person with the problem. Too often an unfortunate search for the culprit responsible for the so-called "mess in mental health" takes place at this time. We have all heard governors accused of failing to provide for adequate mental health budgets. Some people prefer to incriminate legislators for refusing to appropriate sufficient funds. Others say the general populace would refuse to tolerate the increase in taxes. There are others who retort that even if there were sufficient funds there wouldn't be enough trained personnel to utilize them. Thus, it's the medical schools, other psychiatric training centers, schools of social work, university departments of psychology, schools of nursing, ad infinitum, who are delinquent in their responsibilities. Some look elsewhere and state that it is impossible to adjust to a society such as ours. I have even heard it said that the difficulty is the result of too many people letting too many things bother them and thereby needing psychiatric help.

By this time I imagine we all feel a kinship with the confusion felt by the mother who was asked by

her son at the end of an active day, "Mommy, was I a good boy today?" His mother, not wishing to interfere with his self-concept while, desperately wanting to do something about his mischievousness retorted, "You're never a bad boy—you're always a good boy —although you did an awful lot of bad things today." He was not satisfied: "Mommy, wouldn't you like it better if I were always a bad boy who did only good things instead of always being a good boy who did only bad things?"

The next item on our agenda is the environmental setting of the person and his problem. For the sake of brevity, I shall neglect the vital question of the emotional climate of the individual home and the community-at-large. One aspect of the environmental setting that is germane to every community faced with the problem of the excess of demand over supply of treatment for emotionally disturbed children, is how to attract and keep professional help after the positions have been created and the funds allotted. I am afraid that mental health professionals often seem like difficult prima donnas. We seem to require a stimulating atmosphere where we can enjoy an interchange with people who share our individual scientific problems. Too few of us are pioneers. Lacking that, we seem to want more money so that an apparently anomalous situation is created. The community that is about to pioneer in such an endeavor has to be willing to pay higher salaries than the community in which such services are well established and the citizenery is convinced of their value. More important than confreres or income is the need to feel that we are accomplishing something with our skills. The majority of us are more content doing a lot of good for fewer patients than doing something inadequate for large numbers. The community has to tolerate this peculiarity, if you will, and also protect us from the pressure of their overwhelming needs until we develop more efficient techniques.

This would seem like an appropriate time to explore the roots of the problem in the past. We do not have to go back very far because the treatment of emotionally disturbed children is relatively new. The custodial care of mentally defective children was the principal endeavor of child psychiatry until recently. Several historic events around the turn of the century presaged the change. In our individual work with children the most important was the development of *dynamic* psychiatry. Sigmund Freud in Vienna and Adolf Meyer in this country, contributed a great impetus to the development of child psychiatry by their appreciation of the influence of the early years of life on future emotional development. Around the same time, Binet and Simon in Paris developed psychometric tests in an effort to estimate innate intellectual endowment. Just before the turn of the century, juvenile courts were established so that children who broke the law, were not dealt with in the same manner as adult criminals. Dr. William Healey, a pioneering psychiatrist and psychoanalyst, applied dynamic psychiatric principles in his work with Chicago's delinquent children. It was not until the third decade of the twentieth century that the first child guidance clinic, as we now think of them, was established in Boston.

Shortly after the turn of the century, a law student named Clifford Beers was hospitalized for emotional illness. After recovery he devoted his energetic brilliance to the betterment of emotional health. His autobiographic "A Mind that Found Itself" created quite an impact. He founded the organization that is now called The National Association for Mental Health.

Just this past year, subspecialty certification in child psychiatry was established by The American Board of Psychiatry and Neurology, Inc. The requirements for examination are four years of residency training followed by two years of experience in child psychiatry, and certification in psychiatry.

Diagnostically, we do have problems, but we do not have a "mess" that we have to blame some one for. Our situation is similar to that of the rest of medicine. We are younger. The first physicians were created, in part, by the demands of the ill. The subsequent development of specialists seems to be the result of a comparable impetus. The mentally ill, especially the young, are less effective in expressing their needs than any other group of patients. Thus, the response to these needs has been delayed.

Prognostically, statistics make it look as if our children's emotional problems are increasing. Most observers feel that this is largely a consequence of increasing diagnostic acumen. I do not say this to lull us into complacency. On the contrary, I take issue with the elder statesman who felt reassured when an archeologic excavation unearthed an ancient tablet demonstrating that many centuries ago people were equally as worried as our parents were and as we are; that the future is gravely imperiled because of the shortcomings of the younger generation. When we consider the technologic advances that have accrued through the ages, should we not be concerned over

this lack of progress in human relations? Perhaps the persistence of the worry about the younger generation is symptomatic of a chronic deficiency in constructive communication between adults and youth.

Our last task is the formulation of a treatment plan. Clearly, therapeutic intervention is indicated. We need to train more mental health professionals. We need to sharpen our tools—constantly improving our techniques of treating emotional problems and developing the facilities required for modern treatment. We must increase and refine our efforts at prevention. In this realm, the family physician's role is paramount. It might be nihilistically argued that we cannot hope to prevent what we are still clumsy in treating. This should not deter the physician, for there are a host of diseases that we know how to prevent far better than we know how to treat.

Lastly, we should not destructively waste our energies looking for someone to blame for the manifold problems inherent in the treatment of emotionally disturbed children. Mental health is everyone's affair.

Health Careers Program Initiated by Council

Much effort has been expended by the staff and members of the Health Careers Committee. Thousands of Michigan students have seen health career films, obtained health career booklets and heard inspiring talks by members of the various professions represented on the Committee as well as by staff personnel.

Repeatedly the students and counselors have urged us to try to develop a scholarship or loan program for students interested in going into a health career. Surveys show that more than 50 per cent of the talented students in high school are not going beyond because of the lack of funds.

An all-out campaign to be known as a "Bridge to a Health Career" will be announced in the near future. This program will be an all-out drive through women's auxiliaries and other organizations in every Michigan community to see that an adequate supply of youngsters are informed of opportunities in a health career and that those students that need financial assistance to continue their education are given the assistance and cooperation deemed essential to attain their vocation.

Many students and counselors recommended that it would be well to try to enlighten students in Junior high schools about the health career opportunities.

An illustrated health career booklet on "The Health Team in Pharmacy" was developed during the past few months in cooperation with and under the guidance of the Careers in Pharmacy Committee of the Michigan State Pharmaceutical Association. Parke, Davis & Company and Upjohn Company were so impressed with the possibilities of this booklet that they agreed to make a joint grant sufficient to print 20,000 booklets. They will be distributed to students and vocational counselors in all schools. Don Meredith of the Upjohn Company, George Bender of Parke, Davis & Company, and John Butts, Executive Secretary of the Michigan State Pharmaceutical Association will help develop the material.

The Michigan State Dental Association and the Michigan State Industrial Nurses Association have also authorized the Council to proceed on similar booklets. Eventually the Health Careers Committee hopes to be able to have all health careers covered.—JOHN A. DOHERTY.

Psychosomatic Compliance in an Infant

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THIS PAPER details the origin and fate of a dermatologic lesion in a male infant; from its inception at the age of six months until its resolution at the age of nine months, subsequent to the successful resolution of unconscious emotional conflicts by his mother.

The mother, an articulate, well-educated woman, came for psychotherapy complaining of a wide spectrum of symptoms, the most significant (in relationship to the subject of this paper) being her intense anxiety, feelings of inadequacy in all spheres of activity, and a compulsive need to be superior to others. Her first child, a girl, was three years old at the time of her son's birth. The mother had fantasied before his birth that her second child would be a girl, and had not seriously considered any other outcome. When, in the delivery room, she had learned of the newly delivered child's sex, she had "burst into bitter tears;"—a mystery to herself and of considerable alarm to the obstetrician. He had questioned her as to their cause but she had been aware of no thoughts which could have been responsible for her behavior. After approximately fifteen minutes of inconsolable weeping she had been administered a sedative and she went to sleep. Both she and her husband had been "delighted to have a boy," though she privately entertained some reservations, believing that "a boy will be too difficult to handle—I won't know what to do with him." She named her son after her youngest brother of whom she was especially fond.

The mother was the oldest in a sibship of three, her two brothers being three and six years younger than she. Her father had wanted his first child to be a boy and had not been hesitant in reminding her of his disappointment during her childhood. She had been far from neglected during childhood but her brothers were clearly her parents' favorites.

She related how, as a child of three, she had "out of curiosity" interrupted her mother while the latter was breast-feeding her younger brother. Her mother had scolded her for this interference and had sent her from the room. Never again did she intrude or ask questions about the scene she had witnessed. She gave an account of mutual genital fondling on one occasion with her next younger brother when she was six and he three years of age, but had no recall of the impression this experience made upon her.

Just prior to seeking psychotherapeutic help, an exhibitionist had exposed himself to her—to which event she had experienced simultaneous fascination and revulsion. Several consultations with her family physician having proved insufficient to resolve this disturbing inconsistency of feeling; she asked him to refer her to a psychiatrist.

Of her family constellation she once said, "I always have the feeling that the oldest one should have been a boy. If things had just been different. An older brother would have brought home his friends and it would have been so much easier to get a man." (Prior to marriage she had been preoccupied with the fear of spinsterhood.)

When her son was six months old he developed a "rash." For the following two months this subject came up increasingly in her associations in psychotherapy and she began to blame herself for his skin lesion with increasing anxiety concerning it. When I suggested it might be helpful if more detailed information about her son's skin lesion and his relationship to her were provided, she became quite angry and declared that she wasn't to be "put off." She was sure she was somehow responsible for the eczema but this was her therapy and not her *brother's*.

The infant's "eczema" had first been observed by her pediatrician during a routine physical examination when her son was six months old. The lesion had been described by him as an eczema involving a small area on the flexor surface of the left arm at the bend of the elbow. During the following two months it became progressively larger and eliptical in outline; the long axis coinciding with the skin crease. Though the mother referred to the lesion as "weeping" it was in reality only moist with minimal crusting and had never required a dressing. The lesion was so placed that when the arm was flexed on the forearm there was nearly perfect coaptation.

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It varied considerably in color, sometimes appearing pink and at others a fiery red. These changes in appearance were related to various events, some of which will be described in detail. In addition, a generalized rash had developed which involved all areas of the body except the face. These lesions were rather different than the antecubital one, being irregular in outline and varying in distribution and size, macular, often confluent with scaling, at times becoming fiery red and at others fading completely. There were no subjective symptoms insofar as could be determined. The intensity of these lesions seemed to increase during and after meals and "After I have thrown him on the wool rug in the living room."

Without *conscious* intent to misinform, she led me to believe that her pediatrician had suggested an elimination diet to determine the basis of the child's presumed "allergy." She had substituted skimmed milk for whole milk and had eliminated all solid foods from his diet except boiled rice. One by one various foods were to be added and the response noted. Both skin lesions had, subsequent to this rigorous dietary limitation, become increasingly severe. It was at this point that I had suggested the possible value of more detail about her relationship with her son.

It was her custom during meals to seat all of her family at the table, her son excepted. As they ate he was provided with a clear view of the dining table activities. He would, contrary to all expectation, not protest his exclusion, but sit silently as close to the restraining bars of the play pen as he could, staring at the scene before him. After her husband and daughter completed their meal and left the kitchen, the patient would bring her son to the table and devote herself entirely to feeding him. She remarked on how eagerly he ate when finally it came his turn. She followed this order of eating at the table because she found it convenient and did not wish to be interrupted at her own meal by tending to the needs of her son. She related that she was always the first to have finished and had always been intensely annoyed at any interruption while she was eating. By her adroit management of the meal situation, any interruptions which might have arisen had been virtually eliminated.

It was usual that the skin lesions became fiery red during this period of the day, which observation had led her to assume an allergic etiology. Part of her desperation was the fact that not only did the skin lesions not clear up under this hypoallergic regime but had become considerably more severe. She had been emphatic that her son learn to eat as an adult and had been unsuccessfully trying to wean him from the bottle. In contrast to having breast-fed her daughter for several months, she had not even attempted this with her son. When he awoke crying at night she assumed that this was because he was wet and was puzzled when this proved not to be the cause of his distress. She would walk the floor with him trying to comfort him. This was sometimes effective in putting him back to sleep but when his crying would persist or when he would awake a second time she would prepare a bottle for him, leaving him crying in his crib while she did so. She was offered an interpretation to the effect that her behavior represented an acting-out of unconscious wishes to deprive her younger brother of the maternal breast from which she had been displaced in her infancy. I then discovered that the elimination diet had actually been her own idea. She had suggested this regimen to her pediatrician who had concurred and had, in addition, prescribed special soaps, lotions, and ointments to be applied to the rash.

Upon my recommendation, she subsequently brought her son to the table at meal times including him as part of the family. After the child's first experience with this arrangement, the widespread macular lesions faded and in a week all trace of them had disappeared. The patient spontaneously stopped trying to find a "responsible allergen." She fed him at the table henceforth and decided not to rush weaning but to let him decide for himself when he was ready to give up the bottle entirely. When he awoke crying at night she carried him with her while she prepared a bottle. He began sleeping through the entire night after she had done this several times.

The lesion on the left arm, however, remained, apparently stabilized and chronic, varying only in degree of erythema. The patient had used and continued to use a variety of hypo-allergenic products in his daily care. In the course of trying to obtain a more accurate picture of the nature of the remaining antecubital lesion, I asked what it felt like when she touched it. She revealed that she had never touched it and moreover, had carefully avoided doing so. When pressed further for descriptive material she said, "When I hold up his arm I look at it *covetously*." She insisted this was not a slip of the tongue. She knew the actual definition of the term but had also believed that it was synonymous with "surreptitiously" and had employed it in the latter sense.

When changing her son's diapers she had always encouraged her daughter's attendance as a means of "keeping an eye on her." The little girl took up a position at the foot of the bed where she could clearly view her infant brother's genitals, doing so with obvious interest and fascination.

The patient had once heard a story of a little girl who had cut off her younger brother's penis with a pair of scissors. The mother, in her rush to drive the mutilated boy to a doctor to have his penis sewn on, had run over and killed the little girl who had been responsible for the whole affair. The patient was always scrupulously careful of scissors, never permitted her daughter to play with them, and kept the one pair she possessed on a high shelf even she could not reach without standing on a chair.

After an interpretation was offered that she had coveted her brother's penis and had wished to obtain one for herself by castrating him, she remarked that the physical appearance of the "weeping" lesion on the left arm had charateristics clearly similar to the female genitalia. She understood the reason for her scrupulous avoidance of tactile contact with the antecubital lesion after recalling her mother's prohibition against masturbation. Through identification with her daughter, whose name was the same as her own, she had been vicariously gratifying voyeuristic wishes originally directed toward all the males in the family of her childhood.

Prior to the time of the development of the arm lesion, her son had "fussed" so much when she had attempted to diaper him in the customary supine position that she had finally permitted him to have his way and lie on his stomach. It was only when he lay in this position that she could change his diapers without his protest. Occasionally, when she was busy with other duties, her husband would change the child's diapers. At my request she inquired and thereby learned that with his father her son permitted diapering in the conventional position without any difficulty.

Immediately after the foregoing interpretation the child no longer protested the supine diapering position, nor, according to the patient, showed any subsequent interest in lying prone during this procedure. The arm lesion promptly subsided and vanished by the time the child was nine months old.

The fantasy that her second child would be a girl becomes comprehensible when we recognize the repressed wish to deprive her younger brother of his penis. The "bitter tears" which came when she learned of the birth of a son were, I suggest, further expression of the affects she experienced upon the discovery that unlike her brother, she did not have a penis. Her fantasy: "a boy will be too difficult to handle, I won't know what to do with him" further reflects her repressed infantile feelings toward him. The memory of interrupting her mother when the latter was breast-feeding him gives some indication of her envy of her brother's position in life and, perhaps as well, her wish to replace him at her mother's breast. The mutual genital fondling with her brother during childhood augmented her penis-envy and fostered her wish, already present at the oral level, to appropriate for herself that which he possessed and she did not.

She sought therapy when the continued repression of her penis-envy had been threatened by the sight of the exposed genitals of an exhibitionist. The contradictory feelings of fascination and revulsion which she experienced on this occasion are possibly identical with those she experienced when she discovered her brother had a penis, though this must remain a speculation. Her infantile wish to castrate her brother and her fantasy of the punishment for such a wish seem barely disguised in the recalled story of a little girl who cuts off her brother's penis and is killed by her mother as the latter rushes to the doctor to have it replaced. Her phobic attitude about scissors seems too evident to require further comment.

What has been briefly discussed to this point is but the background for the more significant factors yet to be dealt with. The specific response, both behaviorally and psychosomatically, of this infant to these psychic determinants present in his mother must now be considered. Her conscious feelings toward her youngest brother were very warm and loving, one indication of which was her naming her son after him. Other than commenting upon the extraordinary "good looks" of the oldest of her brothers, she had nothing to say of him. It is not difficult to conceive how this had come about. His "good looks" refer to his penis and her lack of conscious interest in him as an adult corresponded to her infantile wish to remove him from the scene. The clinical description of the dermatologic lesion is not very satisfactory. The term "eczema" is probably very loosely applied and certainly the patient's description is not that of "eczema." In any event, these objective dermatologic changes in response to the mother's unconscious attitudes is the significant issue. This child could not talk and it is not clear how much he could understand. At best his knowledge of language must have been very rudimentary. The patient herself vaguely

suspected her responsibility in the production of these lesions. Her special dietary measures served to ward off recognition of this responsibility as well as to further her unconscious desire to deprive her brother, represented by her son, of milk. True to the principle of over-determinism this procedure served as a kind of self-imposed retribution for this unacceptable wish, for she had to prepare double meals, constantly guard her baby against contact with alleged allergens, and suffer a great increase in anxiety. The taunting of the child at meal time, forcing him to watch while she ate, was in revenge for what she felt her youngest brother had inflicted on her when she observed him nursing at the breast. Her lifelong characteristic of anger at being disturbed during a meal is a further manifestation of her infantile wish to remain at her mother's breast without being interrupted by the advent of a younger sibling. That these skin lesions were not due to allergy might be indicated by the history of their occurrence and disappearance. There was an apparent connection between them and the status of the unconscious conflicts in my patient. The specificity of the diapering position the infant assumed with the mother but not with the father is very interesting. I think the mother can be believed when she said she tried to have the child lie on his back and that he protested so greatly that she permitted him to roll on his stomach because this was the only position in which he would lie quietly. There is, nonetheless, the possibility that she unconsciously conspired with him in this symptomatic act, a view which is supported by her evident voyeuristic conflicts which might be expected to be defended against by avoiding as much as possible the sight of a penis.

The evidence presented suggests the following psychodynamic formulations: the generalized skin rash occurred in response to the mother's unconscious wish to starve her son, the representative of her younger brother. The antecubital lesion appeared in response to her castration and penis-envy impulses, likewise originally directed toward her brother (and probably her father as well). Though the same organ, the skin, was subject to this psychosomatic compliance, the clinical appearance of the two lesions was distinctly different and each disappeared independently of the other in specific relationship to the resolution of specific unconscious conflicts.

The generalized dermatologic lesion never reappeared, entirely in keeping with the trend of the patient's associations which hereafter indicated resolution of the oral conflicts related to infantile rivalry with her brothers. The antecubital lesion appeared once again at a later time in the patient's therapy in relationship to other determinants but as in the first instance, in relationship to penis-envy. The specific infantile fantasy which she recalled, was one where her younger brother would get burned by boiling water and that the subsequent scarring would reduce his genitalia in size to match her own. Her recognition of this castration wish toward her brother and its function as an infantile solution to penis-envy eventuated in the immediate disappearance of her son's antecubital lesion. The child is, at this writing, three years old and it remains to be seen if this pattern of psychosomatic compliance will be repeated in the future.

It is fundamental that mental conflict in one person cannot produce symptoms in another and one must not assume that the conflicts of this child's mother produced the psychosomatic symptom described. Rather, the child reacted in the way he did because of the circumstances in which he found himself. Included in those circumstances, and most importantly, was the emotional state of the mother and particularly her unconscious conflicts. When some of the circumstances of this child's life changed, that is—when his mother resolved her emotional conflicts, the child then responded differently than he had before these changes came about. Symptoms are defensive in nature and from the mother we have learned precisely what this infant was defending himself against. This case report represents an instance where somatic symptoms reflected in a surprisingly specific way the unconscious conflicts of a parent, and arose against the dangers the child experienced from this threatening segment of his environment.

A case of psychosomatic compliance in an infant to the unconscious neurotic conflicts in his mother is reported. Two separate and distinct dermatologic lesions were the infant's somatic response to unconscious conflicts at two separate levels of psychosexual development. They appeared and disappeared in precise relationship to the content of these conflicts which they mirrored.

Some Factors Affecting Early Child Development

Their Relation to Disturbances in Children in the First Two Years

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A CHILD'S developmental history includes the sequences of his motor, social, and personality behavior, as he grows. His growth in all these areas occurs within, and is conditioned by, the "climate" provided by the people with whom he forms his significant social relationships—primarily his parents, or their surrogates, and any others in close and continued relationship with him. It follows that the child's development can be understood only in relation to the climate in which it has occurred. For a normal and constructive development to take place, the child's social climate must provide an atmosphere in which (1) the child's interest is aroused, (2) physical warmth and care are provided, and (3) a balance is provided between limitation of and support for appropriate independent behaviors as the child becomes capable of them.

It is obvious that the child's development is inextricably interwoven with his family life, and that disturbances affecting family relationships, particularly any which undermine the ability of mother and father to carry their roles adequately, must have an adverse effect on the child.

Much might be said about social changes which are creating new problems in family life. Suffice it to say here that we are seeing more children, at a younger age, with greater degrees of disturbances. An increasing proportion of this group is made up of children with chronic handicapping illness, mental defect, or physical anomaly. Prior to the development of antibiotics and other revolutionary life-saving techniques, many of these children would have died. They now survive, but the stresses surrounding their lives, particularly the associated failures in adequate mothering, seem to be causing increasingly severe emotional disturbances. At the same time, medical and psychologic research is revealing more clearly the crucial importance of the first year of life, and of the interaction between a child and his mother during this period. It is quite possible that the developmental processes whereby a human infant seeks contact with his mother and becomes attached to her are the most critical processes of early development. Increasing evidence points to the possibility that permanent damage to the future ability of a child to love and to learn may occur during the first year of his life.

Understanding the complications of childhood emotional disorder imposes an increasing responsibility on the pediatrician or generalist but the importance of assuming this responsibility becomes clear when we note that such knowledge bears upon almost the entire medical care of children today. The following list of childhood disturbances, grouped according to time of appearance, reveals the scope of the pediatrician's task:

I. *Developmental Disturbances of the First Year*
[Usually classified in clinics as: (1) Failure to thrive, (2) Fever of undetermined origin, (3) Feeding problems, (4) Nutritional problems. May be subdivided by etiology.]
- A. Deviation secondary to conditions of:
  1. Infectious or metabolic disease
  2. Prematurity
  3. Congenital defect with and without surgical remedy
- B. Primary tension disturbances
  1. Instability and excessive crying (colic)
  2. Sleep-pattern disturbance
  3. Gastrointestinal problem of poor intake, rumination, vomiting, excessive stooling, and constipation
  4. Eczema and non-specific "allergies"
- C. Primary deprivation syndromes
  1. General developmental failure
  2. Inanition; prone to easy infection
  3. Prolonged monotonous movements
  4. Apathy and lack of object relation

II. *Disturbances of Nine to Eighteen Months*
- A. Failure of feeding sequence: inability to wean, remaining on liquid food, anorexia
- B. Oral tension disturbance; excessive thumb or hand sucking, pica

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C. Failure of muscular sequences: does not stand, crawl, or try to walk
D. Failure of social relationship: little smiling reaction, inability to play, failure of beginning vocalization and speech
E. Reactions of irritability and withdrawal: rocking, head-banging, aversion to being touched and comforted
F. Anal tension disturbance: constipation and negativistic withholding, diarrhea and beginning colitis
G. Respiratory: breath-holding to point of syncope, beginning functional asthma

It will be observed that between 1½ years and 2½ years we begin to think of a child's responses much more in social and behavioral terms than in biologic terms. Thus irritability manifestations of crying, whining, and bizarre or hyperactive behavior are generally perceived as having "purpose," namely, "he does it to attract attention," or, "he does it to annoy." During this period it is usual that strong attempts are made by the parents to introduce social discipline. Efforts are made to curb destructive or dangerous behavior and to have the child accept bowel and bladder training. Likewise, there are increasing pressures exerted on a child to speak sensibly, to act in a friendly way toward others and to give up outmoded infantile traits. Thus we may see, clinically, continuations of previous disturbed patterns, but with the child having more capability for action that affects others, and with his behavior complicated by his reaction to the pressures mentioned. In this age range, for instance, frank unmodified infantile traits are possible, and usually mean a state of greater disturbance. More frequently, infantile patterns come to be used selectively and negatively against parental pressures.

III. *Disturbances: Eighteen Months to Two and One-half Years*
(Relatively Minor or Unmodified Pattern from Previous Age or Regression to Such Below:)
A. Failure to develop in motor behavior, speech behavior
B. Infantile irritable behavior as hyperactive with impulsive movement
C. Feeding disturbance—selective anorexia, excessive thumb-sucking or pica (lead paint, hair, industrial toxins)
D. Withdrawal from strangers and other children
E. Specific irritability such as sleep disturbance, head-banging, self-injury, wandering reactions such as getting lost; accident prone
F. Constipation and unwillingness to be trained
G. Development of fears

IV. *Major Psychosomatic Conditions*
A. Milk anemia
B. Severe asthma or eczema
C. Severe constipation to encopresis, pseudo Hirschsprungs disease
D. Severe ulcerative colitis

V. *Major Disturbances of Behavior*
A. Phobic behavior
B. Psychosis
C. Ingestion of noxious substances or development of accident prone pattern
D. Tantrum behavior to the point of self-injury: trauma or physiologic injury

It will be noted that this age group shows for the first time a group of important major conditions, corresponding to severe adult mental states. Such conditions as infantile psychosis, major psychosomatic conditions, and accident-prone conditions may become either irreversible patterns, or directly incompatible with life.

Let us now look more closely at some factors affecting the social climate of the infant's life, which may lead to any of the above-listed types of reaction and disturbance. Obviously, the child's mother carries the most important relationship with the child during his first two years. As previously mentioned, anything which undermines her ability to carry her role as mother, and to provide the constructive social climate necessary for the child's development, must have an adverse effect on the child.

To give adequate mothering, a woman needs to feel comfortable in *other* roles important to her, as well as in that of mother. In general, she must be relatively happy as a female, as a daughter of her own parents (but a grown-up daughter, able to be a separate person), and as a wife. A general satisfaction with her own life enables her to give to her baby and to respond to his needs in a realistic and supportive fashion. Any deep dissatisfaction or unhappiness tends to lead the mother to misuse of the child for *her* needs. She does not see and respond to him as he is, but as her own overwhelming needs make him seem to her. The child then reacts to this pressure, or neglect, or unsuitable treatment of whatever form, with patterns of behavior which such treatment calls forth, but which are not the normal behavior of a healthy child. Usually the mother is not satisfied with the child's reactions, and another phase of destructive interaction begins as she tries to cope with the results of the damage she has already unwittingly caused. It is obviously superficial to "blame" the mother for the child's troubles. She is a human being, responding to her own life situation, as the child is to his. In general, she will be a good mother if she is able to be. The pediatrician's task is to seek to understand the source of her inadequacy and to see that the situation is remedied. Fortunately, in many cases, the physician's support at a crucial point in the mother's experience with her

baby is enough to enable her to overcome the fears and problems which might otherwise undermine her ability to function as a good mother for this child. In cases of older children, where destructive interaction is already established, the physician may be able to help the parents see their relationship to their child (and probably to each other) in a different light, so that the destructive treatment of the child is given up. If this is beyond the scope of the pediatrician, referral of parents and child for psychiatric therapy becomes necessary. Such referral is much more likely to be carried through when the physician gives full support to the parents for such a move.

From experience with many mothers and disturbed children, we have come to recognize three basic types of situations which result in "mothering conflict"—that is, situations in which the mother's own problems and needs cause her to handle her baby in terms of her own disturbed feelings, and prevent her from responding appropriately to the baby's basic needs, and thus from providing a social climate in which the child can develop normally:

1. Situations in which the child is seen by the mother as a substitute for a person lost to her—a man, her own mother, or someone else of comparable significance in her life. Such loss may be recent, through death or separation; or may be a sense of loss persisting from the mother's childhood, because of an unresolved separation conflict with her own mother or father. In the latter case, the mother will have symptoms of loneliness, dependency conflicts, and fantasy restitutions.

In this situation, the mother moves in *too* closely and constantly over-stimulates the child because of her own overwhelming emotional needs. Reactions in the child are usually complications in the first six months, of vomiting and diarrhea, beginning hyperactivity, startle of persistent nature, and sleeping problems.

2. Situations in which the birth of this child is associated in the mother's mind with feelings of being lost, overwhelmed by her own inadequacy or unworthiness, or mistreated by another. Basically, these women are in conflict regarding their own female sexuality. Having a baby, and undertaking the great responsibility of caring for it, emphasizes the predicament in which they feel themselves caught. Following are several examples of situations of this type:

•Pregnancy is felt as a shameful state, showing weakness, inability to live up to mother's ideals, or the result of being forced by superior male strength.

•Pregnancy, child-bearing and rearing represent acceptance of mother's negative predictions; of becoming "ordinary," as opposed to "special;" of lost opportunities for self-realization and creative reward as an individual; the beginning of becoming a drudge, an inferior housewife; of becoming dependent on a man for support. In general, this mother feels herself caught in a situation which represents loss, defeat, and unreward.

•Pregnancy, child-bearing and rearing precipitate the problems of a pseudo-mature woman. These new responsibilities arouse the mother's underlying feelings of inability, stupidity, inadequacy. She is threatened with becoming disorganized and exposed as inadequate, in a situation in which marriage and social support have been achieved by some appearance of maturity or status.

•Conception and pregnancy are initiated out of defiance to mother and to social authority; the assumption of care of the infant is in conflict with the essentially hostile, aggressive meaning of having the child.

•Conception, pregnancy and child-rearing were undertaken with assumed social support, as from mother of the subject and from her husband, and ordinarily would increase the dependent claim on these relationships ("I'm doing it for you"). But conditions suddenly change—her mother becomes otherwise preoccupied, her husband is unfaithful, there are financial reverses, and so forth. In general, a state of loss is brought about by a contingency which surrounds continuance of the responsibility with a feeling of loss, rather than one of gain.

•A particular pregnancy is accompanied by a sudden awareness of a problem—such as feeling that suddenly one really has more children than one can care for; the amount of work is really greater than one person can accomplish; one really does have to *care* for children as well as to bear them; one must choose between abstinence, contraception or too many pregnancies; one planned to have one's children while young and then go places, but it has not worked out that way; it was believed that if she was a good girl, all would be taken care of, but the thought of how much work is involved suddenly reveals the illusory nature of that belief.

In general, this is on the order of the straw that breaks the camel's back: the reality of child care becomes infinitely more burdening and a source of loss, not only because of the current experience, but because of re-evaluation of the past—"Too many kids—too much work—for what?"

•A situation in which feelings are similar to those just described, but they are more clearly in relation to a real emergency or sudden increase in responsibility—such as illness of one's husband, trouble with another child, unexpected changes such as having to move, a multiple pregnancy. The result is the same as above—a feeling of loss in connection with having this baby: too much to do, too little support, too many kids, too much burden, given these circumstances.

Particularly in the situations described under the last two categories (and often in relation to the others described), the mother comes to perceive herself as permanently damaged physically by having had this child; her health is never the same, she has many operations, she sustained permanent laceration and change in pelvic organs. For these mothers, the physical experience of labor and delivery may epitomize the precepitation of a change in feeling about child-bearing and child-rearing, from one of reward to one of inevitable cost and loss.

3. Situations in which the mother feels she has lost, or will lose, her child because of real or imaginary defect in the child

- as a consequence of wishes or content of thought during pregnancy, having to do with abortion or rejection of the role;
- as a consequence of damage to mothering capacity through incestuous wishes, previous abortions, criminal abortions, etc.;
- as a consequence of damage presumed to affect the fetus because of pregnancy diseases—pyelitis, toxemia, bleeding, general health;
- as a consequence of trauma, falls, "not taking care of oneself";
- as a consequence of physical appearance of the child, not necessarily defective, but perceived as defectiveness or unpleasantness by the mother;
- actual defect or health state of the child threatens loss through the child's inability to function normally, and perhaps through death.

Mothers in this third category usually tend to withdraw as much as possible from direct contact with the child—to protect themselves from the guilt, pain, and sense of loss which the child arouses in them. They attempt to cheer themselves with exaggerated emphasis on all normal developments in the child, and yet are not reassured. Their babies often have uncomplicated early courses; and the mothers are genuinely vague about the actual times at which new functions appeared before eight to twelve months of age. These mothers habitually describe their children as showing precocious brightness, alertness, quick development of functions, and later for self care; or if actual defect is present, they gloss it over. Also, when there is real defect, the mother may attempt to deny it by denying the real identity of this child, and making him a substitute object for prior losses, such as for feelings of having been abandoned by her own parents. In such a case, the mother's behavior becomes too close, as in category I.

The problem in all three categories is the *distortion* of the relationship between mother and child. The mother is unable to perceive accurately the needs of the child, and to encourage and support normal development in the child. The *need* and *readiness* of the *child* does not sufficiently determine that which the mother *supports* and that which she *opposes*, especially in respect to dependence-independence behaviors. If a child is not helped to find a balance (and a constantly changing balance, as he grows) between his need to be dependent and his need to take over increasing self-direction, his behavior at any point may precipitate conflict. His mother may find the dependence she fostered becoming irksome; or the behavior which his mother supported is not acceptable or rewarding in relation to any of the other human beings with whom the child has increasing contact.

Basically, every mother needs to have her sense of success and self-worth reinforced by her ability to gratify her infant's needs, and by seeing her baby develop. If her own problems, of whatever nature (and the situations listed by categories do not imply that any mother may be "classified"—most mothers show a mixture of different characteristics) distort her handling of her child and trouble ensues, she is painfully aware of her failure. Such pain may be too great to be acknowledged, and may be hidden under defense mechanisms such as withdrawal, anger, or rigid discipline and control. The basic feeling is guilt, and the pediatrician must be aware that in dealing with mothers in almost all of these situations, he will be dealing with pervasive guilt formation and a variety of defenses against the pain involved.

(An exception may be seen in those cases in which the life of the child is threatened in the neonatal period. In such cases, exploratory and aggressive behavior in the child is prohibited by both mother and family. The need to avoid further disturbance in the mother predominates in the family outlook; the limitation in the child's development which follows is seldom viewed as a problem by the family for this reason.

Mothers whose infants show symptoms of gastrointestinal distress, crying and irritability, sleep disturbances, et cetera, during the first six months are pervasively guilty. Some, just under the level of consciousness, are aware that they are using the infant too much for their purposes, rather than his. Others are aware that they have involved the infant in their unhappiness, but feel a mixture of guilt and powerlessness to change.

For the most part, however, the guilt is too painful to the ego for admissibility, and we know of its existence only through the mother's defensive behavior. Projection and displacement are common. For example, the infant may be perceived (erronenously) as defective in some function, and/or the physician may be blamed for poor diagnosis and for being unhelpful.

There is another basic factor which may act to distort the mother's treatment of her child. A woman, during pregnancy and the early period of neonatal care, is in a state of intense maturational flux herself. She has no life experience comparable to this except, inversely as it were, her own experience as a child, with *her* mother. The constant finding in all pregnancy studies is that the social tie to the own mother is deeply involved *in what is felt toward the infant* and *from the infant*. Thus, when a woman lacks a sense of support and approval from her mother, the infant is reacted to as though he were her mother. That is, if the infant's behavior is negative, the mother feels as though he were accusing or rejecting her. David Levy found, for instance, that 80 per cent of a group of women with first babies brought to be nursed in a hospital setting reacted with anger toward a sleepy baby who would not nurse. Only the highest 20 per cent on Levy's mothering scale were able to be sufficiently patient and tolerant to stay with the need to arouse the infant. This is direct evidence for the belief that states of bias in maternal attitudes may act from the beginning to obscure the actual state of the infant and to distort the meaning of behavior, that it, these infants were sleepy, they were not behaving critically or hatefully toward their mothers.

Thus we see how in many instances some combination of a mother's past experience, together with current events, may make her highly vulnerable to what is or seems like a negative response from her infant, and a sense of failure in infant care ensues. The more upset the mother is, the more dulled becomes her capacity to interpret accurately even the simplest changes in the infant's physical state. Thus, some women misperceive almost every change in the infant and will get into enough difficulty initially, with the result that a rising crisis is perceived and more intensive defensive maneuvers are required to cope with it. It is in this context that support patterns are quite meaningful, since it appears that for the majority of women who get into any difficulty with their infants, there is some degree of regression as a reaction to the stress; they are realistically more dependent and require help because they are less able to exercise judgment and patience. Whatever their maturity level, they tend to become more immature. In such a situation, support may make the difference as of night and day between two types of subsequent course of events. With support, the mother may be quickly enabled to gain (or regain) sufficient confidence and feeling of adequacy so that her fears subside, she can "see straight" and carry on a healthy relationship with her child. Without support, her regression may proceed through various states of inability to cope, to dissociative, and extreme withdrawal reactions. If there are other caretakers around, the infant may thrive; if there are not, the results may be quickly catastrophic, as some of these panic reactions do not even permit a mother to tell when her baby is in a moribund state.

Of all the defenses which a mother may use to cover up her pain and guilt when she feels unsuccessful and unrewarded in her relationship with her baby, the two which appear to cause the greatest damage and destructive interaction are overt anger, and rigidly controlled and disciplined hostility. In situations where the mother is driven to the use of such defenses, it appears that she has been left without any effective support for her own needs. There may actually have been no one to help her; or her behavior may have alienated those who might have helped; or she herself could not trust those who might have helped her. The ability of the infant to make the mother feel guilty may then become involved in an interaction in which maternal affects such as anger, hate, and rage, are directed at the infant in relation to caretaking procedures. When such feelings are being released continuously in infant care, where the mother feels deeply threatened and where supports are lacking or where life circumstances tend to bind the mother unremittingly to this stimulus from the infant, we can look for a development of more severe symptoms in the child. The mother may come to feel the child so accusing and threatening that she has impulses to destroy it, and may temporarily abandon the child in defense against her impulse. The two major fears of children, those of being killed or injured, and those of being abandoned, actually correspond to such attempts of the mother to cope with feelings of being overwhelmed.

We seldom get much of a direct glimpse of these feelings in action, because by their very nature they take place in solitude, in the isolation of the mother-infant combination. We do see many evidences of them, however, in self-destructive syndromes in children, and in the effects of these syndromes on any

adult. In all of the early severe psychosomatic disorders we find some evidence of the severities of this type of interaction. The asthmatic child, the eczematous child, the child with colitis, with anorexia, and the child who swallows all kinds of foreign bodies and who has accidents—are frequently found to have been exposed at an early age to feelings of hate and destruction, which they "play back" subsequently to the parent and in other relationships. Then the parent is threatened anew, by these echoes of previous states of disturbed interaction.

It is worth noting here that these powerful and dreaded feelings which the infant can arouse in the mother are contagious both for fathers and for physicians. These men may themselves be brought, by the influence of the mother's feelings, to acts of panic or of disengagement, to save themselves from being overwhelmed. The mothers demand some kind of identification with themselves in their driven state of fear and hate; the father, physician, or others in close association fear being involved in these feelings, and certainly fear being the recipient of them! Husbands are threatened by being made to feel they are not helpful, not good, not able to support—in fact, that they are not masculine. Physicians are threatened by being required to prove their competency under conditions of assured failure. It is little wonder that they tend to escape if possible, and if not, to submit to giving the mother almost anything she wants regardless of what is the objective state of affairs with the child.

(Other types of parental coping mechanisms, such as phobias, obsessional mechanisms, and psychotic withdrawal enter into infant care in various ways. Most severe personality disorders of chronic type in women appear simply to result in the child's being cared for by someone else—which has the virtue of improved prognosis for the child, in any event.)

Thus we see that once a destructive pattern of interaction is established between a child and his mother, all of the other relationships in the family are forced to support it. Also, because of the mother's "shameful," painful feelings around the basic causes of the disturbed reaction patterns, these causes are "sealed over." It is much easier to ascribe the child's difficulty to organic causes (which are generally secondary to the emotional problem), or to other "external" occurrences which seem outside of family control. An accurate developmental history for a child, under these circumstances, is almost impossible to obtain. The mother cannot give an unbiased history for the child —even to begin to attempt to do so would mean some breaking down of her strongly-built defenses. And the father, were he to attempt it, would not only be attacked by the mother, but would wreck the relationship he has built up with her through assuming the role she demanded of him. We understand broadly that the child is being sacrificed for the sake of the mother's mental health. Even if it were possible to break through the family defenses for the sake of the child, such procedure is by no means assured of success, since the condition in the child may have become irreversible. If this is not the case, it is evident that the child would need to be separated from his parents for a lengthy period of treatment, and it is unlikely that the parents will agree to such separation, or maintain support of it. Often little can be done, until the child breaks completely and so involves the community, or until the child dies.

There is another form of destructive parent-child interaction which is less destructive (that is, the child is less acutely disturbed than in the situation described above), but which is equally impenetrable. These are the situations in which a child's problem behavior is especially adapted to his relation with his mother, and while it causes trouble in school and elsewhere where the child is "on his own," such troubles are less distressing to the mother than would be any change in her child's behavior. In some instances, this begins in an original fear of loss of the child. Whatever the origin, the child is conditioned to behave in a way which protects the mother against feelings of loss, or failure or guilt, which she could not tolerate, and this behavior-system has the father's support. In most such cases, there is no problem in obtaining a developmental history. The problem arises at the point of greater engagement in a treatment process—it becomes clear that the family has no willingness to bring about any basic changes in their interrelationships, and treatment is impossible.

There are a number of permutations to this type of adaptive state in family interaction. In many, the child's symptoms, as mentioned above, are not as distressing as would be any alteration in the *status quo* of the parental relationship, that is, the child's behavior expresses something which is "wrong" in the mother's life, and "wrong" or unsatisfying in her relationship with her husband. The parents can live with each other because the child carries the problem.

An experimental and structured separation may be used as a test of the rigidity or movability of the parental defensive system. Even in cases where parents would not ordinarily assent, this may be brought

about by the necessary admission of the child to a hospital for treatment. At such times, the whole family pattern is temporarily disorganized and the alert pediatrician may find a tremendous opportunity for intervention in an otherwise impenetrable case, and for having the possibility of change in the family pattern tested out. This may be done during the child's initial period of hospitalization in collaboration with the child guidance clinic, but a problem then arises of referral to a suitable agency for follow-up treatment. As described above, in the most difficult cases voluntary treatment is not likely to be carried out. We must therefor consider the possibility of bringing in some form of social authority, if effective action is to be taken.

It is one thing to generalize from past experience about the types of situations which cause conflict in the mothering role; and to generalize about the types of childhood disturbances which may occur as a result of the interference with, or lack of support for, the normal developmental sequences in a child. It is another thing to begin with the disturbed child and try to reconstruct his history, so that we can understand sufficiently the origin of his problem and secure guides for treatment. As indicated above, the more difficult the problem, the less likely are the parents to be able to give an accurate history of the mother-child relationship. The child, of course, can give us little direct help. However, if we can generalize to some extent about what happens to any child as a result of inadequate mothering during the crucial first years, we may then have a foundation, to which we may add what we can infer from the child's symptoms and from what information is available from the family.

Let us then take another look at what happens in the child's early social climate to make him more vulnerable to physical and emotional disturbances, and to distort his normal development. If we examine the implications of the three basic types of mothering conflict cited, we must conclude that all have the basic potentiality of rendering the tie to the mother of less value protectively, for the anxiety provoked in the child by newness, strangeness, and states of change.

In the situation where the mother withdraws from close contact, and where the closest tie is with some other person, it is unlikely that this will be a steady contact for the child. Instead we usually find *inconsistency* of the presence of the mother-figure during the critical period of identification and of introjection of the protective functions of this relationship. It is true that during the first four to six months there is little object specificity—one face may elicit the same response as another from the infant. However, we know from the work of the child development group at the National Institute of Health that an infant is gradually building up cues which are specific to the sounds made by the mother as well as to her appearance. It seems quite likely that an infant can be cued to several significant adults as protective objects. But problems result when these protective objects are *not* steady. If they are not there, and the child is left to experience various states of stress-stimulus in the presence of a less protective object, we are likely to have a vulnerable child who is inherently more prone to episodes of disorganization under stress.

In the situation where the mother withdraws and there are *no* interested caretakers, we find obvious environmental retardation and failure to thrive. When caretakers are available, but employed on other jobs so that they may not be present to protect the child in moments of stress, we may predict the probability that this will result in some defect in the stress-coping mechanism of the child. (There are implications in this for placement during the first two years of life.) The simplest coping device that a child may have under these circumstances is avoidance of the new or of any situation anticipated as stressful. There is always the chance, however, that some double bind may occur which can result in catastrophic disorganization.

The point is frequently made in the conclusions of studies in child development that while, on one hand, parental attitudes are extremely important as determinants of direction taken by the child in his development, there is on the other, no simple cause and effect relationship between any particular parental behavior and a specific outcome of personality in the child.

The one factor which emerges most often is that of the timing and appropriateness of parental behavior during particular phases of child development. It is this aspect of parent-child interaction which points most surely to the reason why specific advice to parents is seldom of any enduring benefit. We can tell parents how to behave toward their children but we cannot tell them how to respond selectively to the manifest needs of the child at a given time. One gets the impression that some of the most popular books on child care have succeeded because they helped the parents to feel more "understood" rather than because they provided a prescription for behavior at all times and under all conditions.

The task of the physician is to help parents do the

right thing at the right time and failing this, to recognize when the parent and child are in serious trouble with each other.

Physicians are, in effect, dealing with parent rearing as well as child rearing. The value of the physician's role in ameliorating parent-child disturbance arises first from his understanding of where the two are consistently getting into trouble and then placing the weight of his support in the right place at the right time.

The important thing about developmental histories is the supportive aspect of the doctor-parent relationship in which the information is collected. It has been our experience that when the relationship between physician and family is good, it will withstand many errors in knowledge and technique. It might equally be said that all of the conditions discussed in this paper may be fully recognized by an attending physician, but will be of no value because of deficiences in the working relationship between parent and physician.

Physicians, like mothers, frequently wish to have blanket instructions to cover all possible difficulties which may come to color parental child-rearing behavior. This presentation is not intended to make such a provision. It is rather that of providing a background of information as a reference frame which will enable the physician to place himself in a position to exert a more constructive influence upon child rearing.

The increasing number of children being added each year to the population and the changes in the causes of serious illness in children are posing a new array of important problems to be faced by the practitioner.

As may be inferred from the range of possibilities mentioned earlier, the physician's role may be the only natural support available to some mothers during periods which may be critical for the future of the child.

The primary purpose of this presentation is to call attention to the importance of this growing area of medical responsibility.

Wayne Postgraduate Courses

Ten postgraduate training courses will be offered in the fall semester by the department of psychiatry of Wayne State University College of Medicine. Most of these courses are co-sponsored by the Wayne County Chapter of the Michigan Academy of General Practice.

Registration for these courses may be made at Office of the Registrar, 1401 Rivard, Detroit 7.

The courses will include Psychiatric Aspects of Medical Practice, Child Psychiatry and the Family Physician, Psychiatric Aspects of Obstetrics and Gynecology, Psychiatric Aspects of Dentistry, Pastoral Psychiatry, Psychotherapy in Medical Practice, Psychiatric Aspects of Internal Medicine—Case Presentations, Psychiatric Aspects of Surgery—Case Presentations, Psychiatric Aspects of Pediatrics—Case Presentations, Some Aspects of Applied Psychiatry.

For further information about any of these courses, call Henry Krystal, M.D., director of postgraduate training, Wayne State University.

Plea for Age

Urging an overhaul on our approach to the problems of our older citizens, Frederick Swartz, M.D., Lansing, urged that we cease coining new words to apply to older people and invite them back to live with the rest of us. Dr. Swartz addressed the 48th annual meeting of the American Podiatry Association meeting in Chicago in August.

"Study has shown that there are no problems which are peculiar to the aging. With perhaps the possible exception of retirement. For example, in 1954, an average year, statistics showed that nationwide some 95 children died of coronary diseases—diseases usually thought of as affecting the aging. And coronary disease appears throughout the statistical table in every five-year age group from birth to five years on up.

In offering a few words of advice in dealing with the subject, Doctor Swartz suggested that we forget our efforts to pigeon-hole everyone by age group and simply recognize them as living people like everyone else.

"To the Glory That Was Greece and the Grandeur That Was Rome . . ."

This quotation from Edgar Allen Poe is used to symbolize an unfortunate trend in the attitude of the lay public toward its medical profession in this era of materialism in scientific development. The decrease in respect and high regard accorded the medical profession until recent years must be the source of concern to the thoughtful physician. Too often one picks up a magazine or newspaper and finds an article written in such a way as to imply discredit to the medical profession.

Only a few years ago, the practice of medicine was the goal of many of the highly qualified high school and college students. Even as recently as fifteen years ago, the applications for medical school were many times the number who could be accepted. A high percentage of these applicants were "A" students. Approximately a third of the students now applying for admission to medical school have an all-"A" record. The physician and his profession appear to have obscured much of their glory; fields such as physics and chemistry have been attracting the highly qualified student.

It is well worthwhile to examine possible reasons for this change in mental attitude towards the Doctor of Medicine. Recently a lay article appeared listing a number of different and important civic programs which organized medicine had opposed and yet which eventually came to be established. In general these programs are now supported by organized medicine and are considered to be of value to the American public. The article, obviously biased, nevertheless emphasized the fact that organized medicine had opposed these developments on the basis of the danger of "socialized medicine." The significance in terms of public relations of this kind of implication of medical shortsightedness is particularly important, perhaps more so than most of us realize. It is vitally important that each physician make a careful personal evaluation and then appoint himself as a committee of one to improve in every way possible public relations with the medical profession. This type of activity should be undertaken both in professional and social activities. Each health and welfare problem proposed to us should be given careful consideration.

Three "public relations" factors would seem to be of particular significance for every physician:

1. The tendency to place a greater degree of emphasis on "scientific" medicine than perhaps is warranted, with a relative diminution in emotional investment of ourselves in our patients. The danger of falling into this trap is increased by some of the facilities at hand for our use, the "miracledrugs" such as the anti-infective agents and the psychotropic drugs. Important developments in surgery (i.e., cardiac surgery) and the extraordinary progress in the

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technical aspect of medicine are important factors which may obscure every patient's need for his *personal* physician.

2. Another "trap" is the trend toward a "more businesslike" approach to the practice of medicine. Reported high incomes of physicians and comments about insistence upon high fees reported in the press, cannot but be significant factors in the undesirable change in attitude toward the medical profession. The kindly, sympathetic, understanding support given by most physicians to their patients in financial difficulty rarely makes news, but the isolated situation makes headlines.

3. The third factor which is of considerable sifinificance is that which might be called medical sibling rivalry. This issue of THE JOURNAL is devoted to the problem of mental illness and health. During the past few years, psychiatry has broadened and developed into a field that includes the study of normal personality, the pathological aspects of human relations and the maintenance of mental health. Specialties in the field of psychiatry such as child psychiatry, industrial psychiatry, forensic psychiatry, have developed rapidly. Thus medical co-ordination and co-operation with other professions such as psychology and social work have become increasingly important. The extraordinarily rapid development in the field of psychiatry must of necessity be in direct relation to public need, but like all rapidly developing fields, psychiatry has been involved with significant growing pains. *The psychiatrist needs the intelligent co-operation and support of the physician in other fields just as other physicians need the help of psychiatrists.* For the needed benefit of all medicine the strong and often expressed opposition to the dynamic concepts of psychiatry must be cleared up as quickly as possible. A more intimate contact between the psychiatrist and the non-psychiatrically trained physician will favor mutual understanding which in the past has not kept pace with the recognition of psychiatry both by organized medicine and by the public. The problems of mental ill health and behavioral disturbances are so great and the incidence so high that they can never be handled satisfactorily other than by the medical profession as a whole.

Organized medicine has taken a strong stand of leadership in the field of mental health through its committees and commissions. It would be to the advantage of all to amplify and strengthen this type of leadership as rapidly as possible. In the May 14 issue of the *Journal of the American Medical Association*, in a very thoughtful and provocative article by Leo W. Simmons, a number of significant comments were made. To quote one of these "The limitations and complications of spawning specialization and fragmentation of services around the patient are products of our times and constitute as yet unsolved issues in interpersonal relations in the field of health care. As a natural component of specialization, interdependency of personnel results in a sharp splitting up of individual responsibility and of pinning down the blame on those who fail in the link segments of responsibility." It is obvious that this statement is of great significance. In the use of numerous consultants some of the personal interest in the patient (the art of medicine) can be lost. The increasing use of laboratory diagnostic procedures with a consequent reduction in the amount of individual physician-patient relationship and the possibility of prescribing antibiotics or drugs without careful evaluation of the patient's problem, lend themselves altogether too much to a public consideration of the physician as a "technician."

That there are overwhelming needs for more young people qualified to enter the study of medicine, and for more places for training such young people, is obvious to everyone. Perhaps each one of us can do his bit in trying to clear the way for these medical developments.

It is hoped that this new issue of THE JOURNAL will be of great interest to all members of the Michigan State Medical Society and that a special mental health issue of THE JOURNAL will be produced annually. The Committee on Mental Health of the Michigan State Medical Society wishes to express the appreciation of its members to the editor of THE JOURNAL and to the Society for the opportunity of bringing to you the material herein contained.

RAYMOND W. WAGGONER, M.D.
Chairman, Department of Psychiatry,
University of Michigan

Medicine Must Advance

Down through the ages, the history of medicine has been one of continuing progress in one field or another of medical research, medical knowledge, medical skill, medical ability to apply for the benefit of patients the things learned in past experience. That is the way the human culture has developed and in medicine it has been unusually true. Great names have appeared during the ages and are still developing in the special fields of knowledge which make up the accustomed work of the profession.

On September 27-30, 1960, Michigan medicine is staging another assembly in which new knowledge and advanced thought are being demonstrated to our membership. A program has been set up in Detroit where medicine's best teachers and research workers will present to the membership by papers, discussions and conferences, the latest achievement in the scientific field of endeavor.

Michigan has been doing this task for nearly a hundred years. In the early years there was an annual session and a small book published. Fifty-eight years ago it was recognized that better methods of communication must be developed. The profession, through its leaders, its officers and advisors accomplished a complete reorganization of the association and its method of communication; bringing new thought, new ideas, new plans and new programs to each member once a month. The scientific work of the Society was divided into appropriate sections such as medicine, surgery, obstetrics and gynecology.

Fourteen years ago, a second Clinical Institute was established so that the members now meet twice a year for practical and scientific programs, given to us by the best teachers we can select from our own state and from near or distant centers. We have recorded three evolutionary changes in the scientific aspect.

Economic Problems

We have always believed that when new problems are presented and new needs are established and recognized, the medical profession will satisfactorily solve its socio-economic problems as well as the scientific ones. Three or four decades ago these problems were those of the individual doctor trying to make a living. Most doctors had serious odds to overcome although a few were geniuses in socio-logic as well as scientific understanding.

During the 1920's and 1930's the public (our patients) went through an economic wringer in which organized relief became an actuality. Groups and societies in cities throughout the country established welfare funds and community chests to act as relief agencies. The chief activity of these organizations was caring for immediate relief. The medical profession was faced with its side of the general problem. Politicians were complaining that too many people were not receiving needed medical attention.

In Michigan, several of our county medical societies and the state medical society recognized the problem and spent more than 10 years in research, study and effort. Finally, the profession developed Blue Shield. It was a completely new concept of administering medical care to our patients and it was not perfect. The Blue Cross-Blue Shield negated the complaint that vast numbers of our people were not getting and could not get needed medical care.

The criticisms during the 1930's from politicians and from labor leaders were rather severe. Some of them labored several years with determined effort to produce a national compulsory medical insurance program. A few of our own doctors believed that by establishing a voluntary prepaid service program, the medical profession was setting up a project which the government could readily take over. The threat of national compulsory health insurance was lessened—almost forgotten. But it is again before us on the basis of care for the senior citizens, the aged, and has become a political campaign issue.

Blue Shield has functioned tremendously well—it has grown to cover half the people of the state of Michigan and in short 20-year period has paid over $425,000,000 for medical services to its subscribers, covering millions of individual cases. It has been accused of being inefficient, of not holding down abuses and of being too expensive.

The medical profession of the state of Michigan is now faced with another problem growing out of the complete and unexpected success of our efforts to supply medical services for our subscribers.

Three years ago Blue Shield asked for its first rate increase since 1950, which was only partially granted, and was delayed several months. The new M-75 plan which was started two years ago has been popular, and has given many new extended services to subscribers. This new plan has now run into financial difficulty. Numerous studies have been made by the Michigan State Medical Society, Michigan Medical Service, national Blue Shield officials and by the Commission appointed by the Governor to make a study "to determine how to make the service more inclusive and less expensive." This last study is still in process at the University of Michigan following a year of newspaper criticism, which blamed the medical profession for all shortcomings.

The financial difficulties which developed this current year required application for another rate increase, which was requested. The Michigan Insurance Commissioner held public hearings, made his own study and instead of allowing the 19.5 per cent requested, allowed 11.5 per cent for one year with the distinct instruction that this was not to be used to build up a reserve. The medical profession was in-

structed to produce solutions to "abuses" and a plan which would work to preserve the Blue Shield program, the protection of half of Michigan's population. (See "Correspondence".)

At the July meeting of the Michigan State Medical Society Council and of the Blue Shield Board at Mackinac Island, the Insurance Commissioner again cautioned The Council and other groups. He knows of the abuses that have developed; he lays much of it to neglect on the part of the medical profession, and he insists that they make this 11.5 per cent increase work for a year, as well as to produce a workable plan free of "abuses." This is a challenge and obligation not of *some* of the doctors but *all* of them, if the doctors are to save Blue Shield. Blue Shield has proved such a Godsend to our state and its population that it must be saved.

Many groups have been working and many proposals have been made, but an answer must yet be developed, and that without delay. The MSMS annual session which will convene with the house of Delegates meeting in Detroit, Sunday, September 25, and extend most of that week, must produce answers. The State Medical Society and the doctors of Michigan are on trial. They must and they will produce a workable program. Prepaid medical care has become a problem of all doctors and not just the Board of Directors of Blue Shield. That Board and its advisors have been working under handicaps, under unfair criticism and vilification not only from the advocates of socialized medicine but from some of our own members.

If Blue Shield is to be saved, now is the time. We have been specific. When the cards are down, when the going is tough, the medical profession always has and always will come forth with a new or a rejuvenated concept.

The Doctor Must Produce

The critics, the public, labor, even government refuses to recognize or admit misuse and abuse, or accept blame as applying to patients, families, hospitals and labor organizations. Blame is "obviously" on the doctor who admits the patient and discharges him.

A situation has developed which could seriously challenge solvency. Whether he likes it or not, the only person who can salvage prepaid medical care is the individual doctor—each and every one of us. We can save our program.

It is well known that not all doctors are completely sympathetic. Many have proposed changes, expansions, increased coverage and liberalization—all of which have contributed to the present difficulties.

Prepaid and medically controlled medical insurance can be saved or lost. If we lose, compulsory government insurance and care will not be far behind.

Appreciation

Our sincere thanks go to Raymond W. Waggoner, M.D., of Ann Arbor, for his invaluable help in making the selection of original papers for this Mental Health Number of THE JOURNAL. He has spent many hours going over material, in consultations with his committee, and in providing the bulk of the material for this special number.

MSMS Past President Hull Much Alive

Print shops and publishing offices are filled with gremlins, which are forever plaguing editors and printers. One of these gremlins succeeded in slipping in an extra asterisk in the August JOURNAL—and the asterisk noted that L. W. Hull, M.D., Past-President of MSMS, was "deceased."

Nothing could be farther from the truth. Doctor Hull is very much alive in Detroit, where he continues to put in busy days and happy ones. The MSMS staff humbly apologizes to our beloved past president and hopes that he will understand that errors occasionally do happen.

Best wishes, Doctor Hull, for many more years of service to humanity and medicine!

AMWA Calendar

The following activities have been arranged for the 1960-61 program of the American Medical Women's Association, Michigan Branch:

October 12—Lillian T. Majally, executive director of the AMWA, will speak, and prospective members are invited; *November 2*—Combined meeting of lawyers and doctors, the speaker to be announced later; *January, 1961*—Electronic tour and lunch, courtesy of Michigan Bell Telephone Company; *March 8, 1961*—Panel on breast feeding, with the obstetrical, pediatric and psychiatric view point, and *May, 1961*—The final social event.

Launch New Program to Encourage International Health Research

A new federal program intended to spur international health research efforts has been inaugurated. President Eisenhower began the effort when he signed into law the International Health Research Act approved by Congress.

The measure, which involves no federal appropriations and does not establish any new government agency, authorizes the government to: (1) make grants to public or private nonprofit institutions in foreign countries to establish and maintain fellowships; (2) make grants or loans of equipment, medical, biological, physical or chemical substances or other materials for use by public or private nonprofit institutions or individuals in foreign countries; (3) participate and cooperate in any international health research training conferences; (4) facilitate the interchange between the U. S. and foreign countries, and among foreign countries of research scientists, including the payment of their subsistence and travel while they are away from their places of residence; and (5) procure the services of consultants on a temporary basis.

Foreign currencies or credits available to the United States would finance the country's share of the program.

Sees Hospital Construction Expenditures at New Peak

A 4 per cent increase in private hospital construction was noted for the first five months of 1960 by the American Association of Fund Raising Counsel. Construction for that period was valued at $236 million.

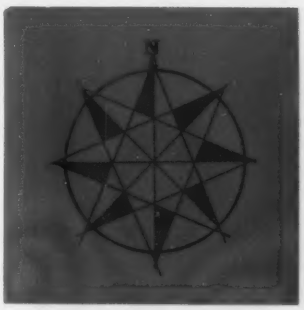
Based on the five-month figures, the association forecast that 1960 expenditures for private hospital construction will reach the record figure of $675 million, $75 million more than the previous record established in 1958.

The AAFRC estimates that $300 million of total 1960 construction costs would come from private sources. "If the present pace of public support continues," he said, "and if federal aid is not curtailed, we can reasonably expect our hospitals to meet current and future needs."

Many Youths in Reserve Program

A total of 123 medical, dental, engineering, science, nurse and veterinary students from 61 four-year professional schools are now on temporary active duty with the U. S. Public Health Service as members of the Service's Commissioned Reserve.

Students are offered commissions in grades equivalent to second lieutenant in the Army. They are then placed on active duty for a period not to exceed 120 days. Opportunities for either medical or dental internships or active duty upon graduation are also available to qualified students.



The United States Pharmacopeial Decennial Convention

Pre-Convention Conference

Ground work for the 1960 convention was laid at a Pre-Convention Conference on the evening of March 28. Background, current problems, and specific suggestions were discussed by three speakers: Windsor C. Cutting, M.D., Professor of Experimental Therapeutics, Stanford University School of Medicine; George P. Larrick, Sc.D., Commissioner of Food and Drugs, United States Department of Health, Education, and Welfare; and Linwood F. Tice, Sc.D., Dean, Philadelphia College of Pharmacy and Science.

Windsor C. Cutting, M.D., commented on earlier pharmacopeias and their contributions of value, safety, and standards for drugs and pointed out that the physician practices medicine securely because of these contributions. His recommendations for problems in the coming decade included more frequent publication of supplements, possible amalgamation with the National Formulary, changes in format, standardization of dosage forms, simplification of salt designations, and identification of drugs through good nomenclature. He also stated that as an alternative to ultimate absorbtion by the Food and Drug Administration, the new form of financing the USP must be seriously considered.

George P. Larrick, Sc.D., mentioned the important role the USP played in drug law enforcement at the local level for years before the federal drug law was inacted in 1906. He stated that legal authorities believe that the quasi-legislative authority of Pharmacopeial officials would be supported by the Supreme Court, and he pointed out the value of the Pharmacopeia in the enforcement of the current food and drugs laws by the FDA—it provides a list of important drugs carefully selected by leading physicians, for which appropriate tests and standards have been established by leading pharmacists and pharmaceutical chemists.

Linwood F. Tice, Sc.D., indicated the importance of careful selection of personnel for the technical work of the revision committee. He also suggested that the solution to the growing complexity of developing standards, official tests, and assay procedures would be to use the expanded facilities of the laboratories of the American Pharmaceutical Association.

Regular Session

Highlights of the session held on March 29 were a presidential address by Allen H. Bunce, M.D., President of the Convention, and talks by Hugh H. Hussey, M.D., American Medical Association Trustee; Howard C. Newton, Ph.D., President of the American Pharmaceutical Association; and Secretary Arthur S. Flemming, LL.D., Department of Health, Education, and Welfare.

Hugh H. Hussey, M.D., indicated that the American Medical Association's scientific activity is aimed at closer liaison, cooperation, and accomplishment with other scientific organizations in medicine and its allied areas. He stressed the necessity of an independent body to prepare standards and reinforce confidence in drug quality through an unbiased Pharmacopeia. He pointed out that certain government-supported organizations are plagued by low bids from firms whose products may be of uncertain quality and which is often the reason for the low prices. If the states and communities involved can refer to published monographs instead of having to rely solely on the lowest bid, they can eliminate inferior products and assure the physician of reliable medication. He said that the USP needed to speed up procedures of publishing monographs and that the medical profession would like to see standards of identity, purity, and quality which will assure use of medication that would not result in toxic reactions. He also indicated that someone should take hold and make order of the nomenclature chaos and that the USP can do this as a leader in a cooperative and unified effort.

Howard C. Newton, Ph.D., discussed the firm foundation laid down in 1820 for revisions of the Pharmacopeia, pointing out that the primary guidelines then established are still valid and reliable. He suggested a Pharmacopeia in two volumes, one with articles and standards and the other with methods and miscellaneous information. He offered the wholehearted cooperation of the A.Ph.A. including the added service by the enlarged laboratory.

Arthur S. Flemming, LL.D., pointed out that the preeminence of the Pharmacopeia is largely due to the quality of the people who have worked on the revisions over the years and that Congress had recognized this by adopting the requirements as legal standards in 1906. He said that manufacturers of industrial products operate on a sound basis by selecting their raw materials which meet Pharmacopeia standards. The Pharmacopeia thus plays a much larger role than it formerly did. Medical research will raise and eventually solve many important problems as to test procedures, allowable tolerances, and dosages.

Final Sessions

The final sessions were devoted to discussions; committee reports, including the report of the resolutions committee and the report of Dr. Lloyd C. Miller, Director of Revision; and the election and installation of officers and the Board of Trustees.

The resolutions adopted instructed the incoming officers and Board of Trustees to:

1. Work out a better method of selecting simplified, consistent nonproprietary names for all drugs as well as a system of keeping listings of pharmaceuticals by nonproprietary and trade names up to date.

2. Standardize—if possible—and include in the USP standards on hypodermic needles and syringes, clinical thermometers, orthopedic implants, diagnostic test papers and other materials which will be placed in the human body.

3. Publish "caution" statements in USP monographs to insure USP standards are met as long as the drugs are held for sale.

Members of the new Board of Trustees include: Windsor C. Cutting, M.D., Paul L. McLain, M.D., George D. Beal, Ph.D., Patrick H. Costello, Ph.D., George F. Archambault, Ph.D., and Linwood F. Tice, Sc.D.

Officers elected were: President, Arthur C. DeGraff, M.D.; Vice President, Theodore G. Klumpp, M.D.; Treasurer, W. Paul Briggs, Sc.D. Lloyd C. Miller was re-appointed as Director of Revision.

Health Council Posters Offer Advice for Baby Emergencies

Teamwork displayed by many individuals and organizations may mean the difference between life and death for many infants and small children.

In February, the trustees of the Michigan Health Council approved unanimously plans of the Council staff to develop a Baby Emergencies poster to be distributed to Michigan parents with small children.

Brooker L. Masters, M.D., of Fremont arranged a meeting with Gerber Baby Foods Fund Trustees and they approved a grant of $3,500 to cover the cost of printing the poster.

George L. Lowrey, M.D., and Harry A. Towsley, M.D., of the University of Michigan Medical Center, offered their services in the preparation of medical information on the poster. The AMA gave permission to use their latest instructions and illustrations on Mouth-to-Mouth Resuscitation for Infants and Small Children and on Artificial Respiration. Dirk Gringhuis, cover artist for the Michigan State Medical Society Journal, did the art work and illustrations.

* * *

OVER 150,000 POSTERS are now in the process of being distributed throughout Michigan. The poster points out clearly and briefly what parents, baby sitters and others should do if an infant or small youngster is burned, bitten, poisoned, breaks a bone, cracks or knocks out a tooth, steps on a nail, swallows a foreign object, is cut deeply or suffers a convulsion.

The attractive poster provides ample place on the top to list the doctor's name and phone number, fire inhalator, hospital, poison control center, police, closest neighbor and relative so the baby sitter can call for assistance if the parents are away from home when the child is injured. On the reverse side are illustrations and instructions on how to give Mouth-to-Mouth Resuscitation and Artificial Respiration. The poster repeatedly impresses on the parents to contact the doctor as soon as possible after the emergency takes place for further guidance and directions.

Mrs. Robert McGillicuddy of East Lansing, wife of a pediatrician and former president of the Auxiliary to the Ingham County Medical Society and Mrs. Richard Walker, wife of a Kalamazoo dentist, were both so impressed with the poster that they volunteered and now are distributing several thousand posters to medical offices in the Greater Lansing and Greater Kalamazoo areas.

Mrs. Paul Ivkovitch, Reed City, President-Elect, and Mrs. Lorenzo Nelson, Baldwin, District Director of the Auxiliary to the Michigan State Medical Society, are also distributing thousands through medical offices, community health councils and other community groups.

* * *

MARRIED HOUSING directors at Michigan State University and Ferris Institute have given posters to over 2,500 young families on their campuses.

Michigan Farm Bureau has made a series of radio tapes and are distributing this to over 50 Michigan radio stations announcing the poster. They have also distributed it to more than 2,000 farm groups and leaders in Michigan.

The Michigan Hospital Association, Michigan State Dental Association, Michigan State Pharmaceutical Association, as well as more than 95 other member organizations of the Health Council, are cooperating in the distribution.

The University of Michigan Medical Center Well Baby Clinic as well as other departments are giving the form to young parents.

* * *

THE STATE DEPARTMENT of Health, as well as many of the city and county health departments, are using and distributing the form. The Dearborn Health Department, for example, is including it with a letter sent to all new parents as well as a letter sent when a child reaches his first birthday.

The Michigan State Police and the medical department of Ford Motor Company are distributing the form after they give first aid and mouth-to-mouth resuscitation instructions to community groups and supervisory employees. Many other industries are distributing the poster to their employees through their medical and personnel departments.

The Gerber Baby Foods Fund trustees are delighted with the project and share the hope of the Michigan Health Council that it will eventually be in every Michigan home and especially those with small youngsters.

Free copies can be secured by sending a self-addressed envelope to J. A. Doherty, Executive Secretary, Michigan Health Council, P.O. Box 788, East Lansing. Large orders for distribution through medical offices, community groups, etc., can be made in the same manner.

MMS Board Limits Directors' Terms

The Michigan Medical Service Board of Directors has passed a resolution limiting the term of office of board members to a period of two consecutive three-year terms in any consecutive seven-year period. Directors who have completed two consecutive three-year terms can again be nominated after one year has been allowed to elapse.

This action, which conforms to a resolution passed by the 1959 House of Delegates of the Michigan State Medical Society, points out that this office limitation does not apply to any person placed in nomination by the Michigan Hospital Association. The limitation may also be waived in the case of the President or any Board member serving as a representative of the public, by affirmative vote of two thirds of the Directors present at a meeting at which the matter is considered.

WHENEVER COUGH THERAPY IS INDICATED

HYCOMINE® Syrup

THE COMPLETE Rx FOR COUGH CONTROL

cough sedative | antihistamine
decongestant | expectorant

▪ relieves cough and associated symptoms in 15-20 minutes ▪ effective for 6 hours or longer ▪ promotes expectoration ▪ rarely constipates ▪ agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE* Syrup contains:

Hycodan®		
Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.	6.5 mg.
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Phenylephrine Hydrochloride		10 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.

Average adult dose: One teaspoonful after meals and at bedtime. May be habit-forming. Federal law permits oral prescription.

Literature on request

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MICHIGAN DEPARTMENT OF HEALTH

ALBERT E. HEUSTIS M.D., State Health Commissioner

Celery Dermatitis

Last year, a Michigan physician, noting that celery harvesters in his community were developing severe vesicular and bullous lesions, asked the department whether or not contact with diseased celery could be the cause. As a result of this inquiry, the Division of Occupational Health, in cooperation with the Public Health Service, conducted a survey among celery farm workers in Michigan to determine the incidence and the cause of the severe dermatitis occurring among these celery workers.

Of 302 celery workers examined in a random sample, 163 displayed various stages of dermatitis along with areas of depigmentation and hyperpigmentation remaining from previous lesions. They described the disease as "celery burns," "celery blisters," and "celery itch." The celery growers were convinced that the eruption was caused by harvesting or touching plants infected with pink-rot, a fungus infection. It was suggested that photosensitivity might account for the dermatitis.

To determine the role of allergic sensitivity versus that of photoreactivity, a series of six patch tests were done on twenty-five field workers. The patch tests were made with normal celery stalks, crushed but otherwise normal celery leaves, and pink-rot celery. In addition, in the laboratory, patch tests using the same materials were done on five volunteers with no previous exposure to pink-rot celery.

These tests offered strong evidence of a phototoxic reaction. Subsequent tests demonstrated clearly that pink-rot celery contained a highly reactive phototoxic material capable of affecting normal white skin. Mexicans and Negroes are little affected by handling or cutting celery.

As a result of this and other tests, it was determined that celery dermatitis is due to two factors: pink-rot and sunlight. The infected celery tissue exudes a photosensitive material, which, when exposed to sunlight, causes the severe dermatitis.

Prevention of celery dermatitis resolved itself to elimination of the pink-rot infection in the celery plants or providing a suitable skin barrier to eliminate contact with infected plants. To date, there is no known method of controlling pink-rot, although deep plowing and/or soil applications of fungicides offer some degree of control. Therefore, it was necessary to develop a chemical sun screen capable of absorbing a known light spectrum.

Two pharmaceutical companies prepared experimental protective creams that would shield the skin from the exudate and act as a sun screen to the light spectrum. A research project is now under way to determine the effectiveness of these skin creams in the prevention of celery dermatitis. From recent reports, it appears that these preparations have produced effective results, and the celery growers are enthusiastic over the possibility of controlling a disease that has plagued the industry since the introduction of celery in Michigan and the United States.

Change in Organization

Act 13, P.A. 1959, abolished the Office of Hospital Survey and Construction, and Act 26, P.A. 1959 abolished the Michigan Tuberculosis Sanatorium Commission. These acts place responsibility for the operation of the Office of Hospital Survey and Construction and the four state tuberculosis sanatoriums with the State Health Commissioner. Both acts became effective March 19, 1960.

A Division of Hospital and Medical Facilities has been established, making ten divisions in the department. Effective July 1, 1960, Mr. Symond R. Gottlieb was appointed director of this new division.

The Michigan Tuberculosis Sanatorium Commission has been replaced by the Advisory Council on Tuberculosis Sanatoriums. The members of the former Michigan Tuberculosis Sanatorium Commission will continue to serve on the new advisory council.

New Members Appointed to State Council of Health

The Governor has appointed the following new members to the State Council of Health:

John E. Scott, M.D., Director, Grand Traverse Leelanau-Benzie Health Department, Traverse City
Mrs. Katherine Reiman, R.N., Atlanta
Robert McCauley, Ph.D., Michigan State University, East Lansing
Wilbur J. Cohen, Ph.D., School of Social Work, University of Michigan, Ann Arbor.

Blood pressure that goes up with stress often comes down with SERPASIL®

(reserpine CIBA)

One reason that many cases of hypertension respond to Serpasil is that many cases are associated with stress. Stress situations produce stimuli which pass through the sympathetic nerves, constricting blood vessels, and increasing heart rate. Hyperactivity of the sympathetic nervous system may elevate blood pressure; if prolonged, this may produce frank hypertension. By blocking the flow of excessive stimuli to the sympathetic nervous system, Serpasil guards against stress-induced vasoconstriction, brings blood pressure down slowly and gently.

In mild to moderate hypertension, Serpasil is basic therapy, effective alone "...in about 70 per cent of cases..."*

In severe hypertension, Serpasil is valuable as a primer. By adjusting the patient to the physiologic setting of lower pressure, it smooths the way for more potent antihypertensives.

In all grades of hypertension, Serpasil may be used as a background agent. By permitting lower dosage of more potent antihypertensives, Serpasil minimizes the incidence and severity of their side effects.

CIBA
SUMMIT, N. J.

*Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M. A. 51:417 (Dec.) 1955.

Complete information available on request.

Obstetrical Brevits

(This column is sponsored by the Michigan Society of Obstetrics and Gynecology.)

Essentials and Responsibilities of Antenatal Care

Antenatal care for every pregnant woman should be started as early as possible regardless of age, parity, and the number of previous uncomplicated pregnancies she may have had. There is a misconception prevalent among lay people, and some physicians, that previous uneventful gestational experiences presage uncomplicated future pregnancies and deliveries. This fallacy is exposed by the well-known fact that after the age of twenty-five, the hazards of ruptured uterus, hemorrhage, toxemia, embolism, prolonged labor, prematurity and congenital defects of offspring, increase with each succeeding pregnancy. The thirty-five-year-old multipara requires prenatal care even more than the twenty-five-year-old primipara. Cardiac, renal, vascular, pulmonary, metabolic and other systemic disorders progress, and the risk from indirect and non-related causes of obstetric mortality and morbidity grows as the patient's age advances.

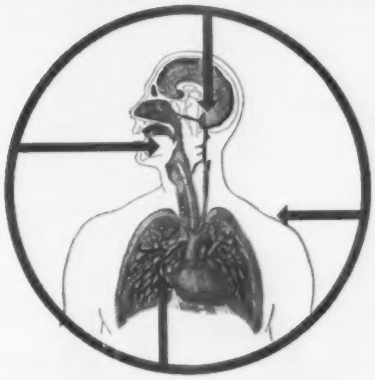
Many of the deaths from ruptured ectopic pregnancy could be avoided if patients afforded their physician an opportunity to recognize the condition by pelvic examination after the appearance of the first signs of pregnancy and before rupture occurs. Abortions often take place before the diagnosis of pregnancy has been made, suitable instructions can be given, and prophylactic therapy instituted. In the first trimester, all of the important structures of the embryo pass through their formative stages, and it is in this period of pregnancy that proper nutrition, avoidance of acute infections, and metabolic regulation must be assured to reduce the incidence of congenitally defective fetuses, abortions, stillbirths and premature births.

In uncomplicated pregnancies, the prenatal visits should be made at four-week intervals until the end of the seventh month, at intervals of two weeks during the eighth month, and weekly in the ninth month of pregnancy. When there is systemic disease or if complications of pregnancy arise, the frequency of the visits must be increased. Adequate prenatal care enables the doctor to learn the physical and emotional characteristics of his patient, and the patient, by observing his skill, dependability and understanding develops confidence in her attending physician.

Adequate antenatal care involves keeping a careful family, medical and obstetrical history, and a record of events since the present pregnancy was first sus-

(Continued on Page 1430)

Now—All cold symptoms can be controlled



Tussagesic

timed-release tablets

Controls congestion
with Triaminic,[1,2,3] the leading oral nasal decongestant.

Controls aches and fever
with well-tolerated APAP, non-addictive analgetic[4] and excellent antipyretic.[5]

Each TUSSAGESIC Tablet provides:

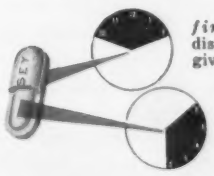
TRIAMINIC®	50 mg.
(phenylpropanolamine HCl	25 mg.
pheniramine maleate	12.5 mg.
pyrilamine maleate	12.5 mg.)
Dormethan (brand of dextromethorphan HBr)	30 mg.
Terpin hydrate	180 mg.
APAP (N-acetyl-p-aminophenol)	325 mg.

References: 1. Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958. 4. Bonica, J. J.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 272. 5. Dascomb, H. E.: in Current Therapy, Saunders, Phila., 1958, p.78. 6. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p.547.

Controls cough centrally
with non-narcotic Dormethan, possessing "amply demonstrated" antitussive activity,[6] as effective as codeine.

Liquefies tenacious mucus
with terpin hydrate, classic expectorant.

Prompt and prolonged relief because of this special "timed release" design:



first—the outer layer dissolves within minutes to give 3 to 4 hours of relief

then—the inner core releases its ingredients to sustain relief for 3 to 4 more hours

Dosage: One tablet in the morning, midafternoon and at bedtime. Pediatric dosage chart for Tussagesic Suspension available on request.

TUSSAGESIC SUSPENSION provides palatability and convenience which make it especially attractive to children and other patients who prefer liquid medication.

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(Continued from Page 1428)

pected. In addition to a complete physical examination, special attention must be given to the pelvis and abdomen, in order to confirm the pregnancy; to determine that the conceptus is intrauterine, and that there are no pelvic abnormalities, such as tumors, malpositions or inflammatory disease which might jeopardize the favorable outcome of the pregnancy.

Proper examination of the pelvis includes bimanual examination and inspection of the vagina and cervix with the aid of a speculum and a good source of light. Adequacy of the pelvis for normal vaginal delivery, in most instances, can be determined by external and internal pelvimetry, but when inconclusives, radiographic pelvimetry is best resorted to late in the pregnancy.

At the first prenatal visit, the following laboratory studies should be made: complete urinalysis, blood count, serologic test for syphilis, determination of blood type and the Rh factor. Abnormalities revealed by these tests may indicate the need for additional examinations and therapy. The normal weight, as well as the weight and blood pressure at the time of the first visit, are taken to serve for comparison with observations taken as pregnancy proceeds. The height of the fundus is recorded. Immunization against poliomyelitis should be started at the first visit, if it hasn't already been done.

The patient is instructed regarding the physiology and hygiene of pregnancy, nutrition, exercise, rest, bathing, sexual relations, girdles, brassieres, et cetera. It is good practice to prescribe a preparation of essential vitamins and minerals to assure an adequate intake of these important substances throughout pregnancy. When complicating conditions exist, additional appropriate directions are given and the frequency of the visits increased. The patient is admonished to report immediately: (1) persistent vomiting, (2) unusual vaginal discharge or bleeding, (3) abdominal pain, (4) visual disturbances, (5) headaches, (6) a gain in weight of more than one pound a week, (7) edema, (8) dyspnea, and (9) violent fetal movements. At each subsequent visit, weight and blood pressure are recorded, the height of the fundus noted and urinalysis is performed. A gain of more than one pound per week, blood pressure above 140/90, visual disturbances, headaches, edema or albuminuria must be regarded as signs of threatened toxemia. Normal growth of the embryo is confirmed by measuring the increasing height of the fundus.

In the later months of pregnancy, the patient is instructed in the physiology of labor and the signs of the onset of labor. Prenatal education, whether given by the attending physician or in classes for expectant parents, will allay many fears and the apprehensions of most pregnant women and assure their better cooperation during labor.

These responsibilities of the obstetrician can be fulfilled only when his services are sought early in and throughout pregnancy. There is still great need for education of lay people in the importance of antenatal care.

American Board of Obstetrics and Gynecology

The next scheduled examination, (Part I), written will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, January 13, 1961.

Candidates submitting applications in 1960 for the 1961 examinations are not required to submit case reports as previously required to complete the Part I examinations of this Board. In lieu of this requirement, new candidates are required to keep in their files a duplicate list of hospital admissions as submitted with their application, for submittal at the annual meeting in Chicago, should they become eligible to take the Part II (oral) examinations.

Reapplying candidates will be required to submit case reports for review thirty days after notification of eligibility. Scheduled Part I and candidates resubmitting case reports are required to submit case reports prior to August 1 each year.

Current bulletins may be obtained by writing to: Robert L. Faulkner, M.D., Executive Secretary and Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

IN MEMORIAM

E. A. BICKNELL, M.D., fifty-nine, a Detroit physician for thirty-five years, died August 1, 1960.

A native of Dunnville, Ontario, Doctor Bicknell was a graduate of the University of Toronto Medical School. He served as a major in the U. S. Army Medical Corps in World War II.

He was a member of the Detroit Athletic Club.

W. H. BROCK, M.D., eighty-six, Saginaw physician, died March 11, 1960.

Doctor Brock was a graduate of the Saginaw Valley Medical College and practiced in Midland prior to beginning his practice in Saginaw.

He was a Life Member of the Michigan State Medical Society. Other memberships included Masons, Shriners and Elks.

LEON F. COBB, M.D., sixty-three, Pontiac physician and surgeon for thirty-eight years, died July 28, 1960.

Born on a Pontiac township farm, Doctor Cobb was graduated from Ferris Institute in 1917, and received his medical degree from Wayne State University in 1921.

Doctor Cobb interned and took his residency at Grace, Booth and Detroit Receiving Hospitals. He began practice in Pontiac in 1922, and was one of Oakland County's original deputy coroners, having been appointed to that post more than twenty-five years ago.

He was a past president of the Oakland County Medical Society.

Other memberships included First Congregational Church, Pontiac Masonic Lodge No. 21, Knights of Pythias and Kiwanis Club.

ALBERT S. JACKNOW, M.D., thirty-four, a Pontiac orthopedic surgeon, died July 25, 1960.

Doctor Jacknow devoted much of his time to work in the Michigan Crippled Children's Society.

He was a 1952 graduate of the University of Western Ontario Medical School. He was on the staffs of Pontiac's St. Joseph Mercy Hospital and Pontiac General Hospital, and was a member of the Detroit Orthopedic Society.

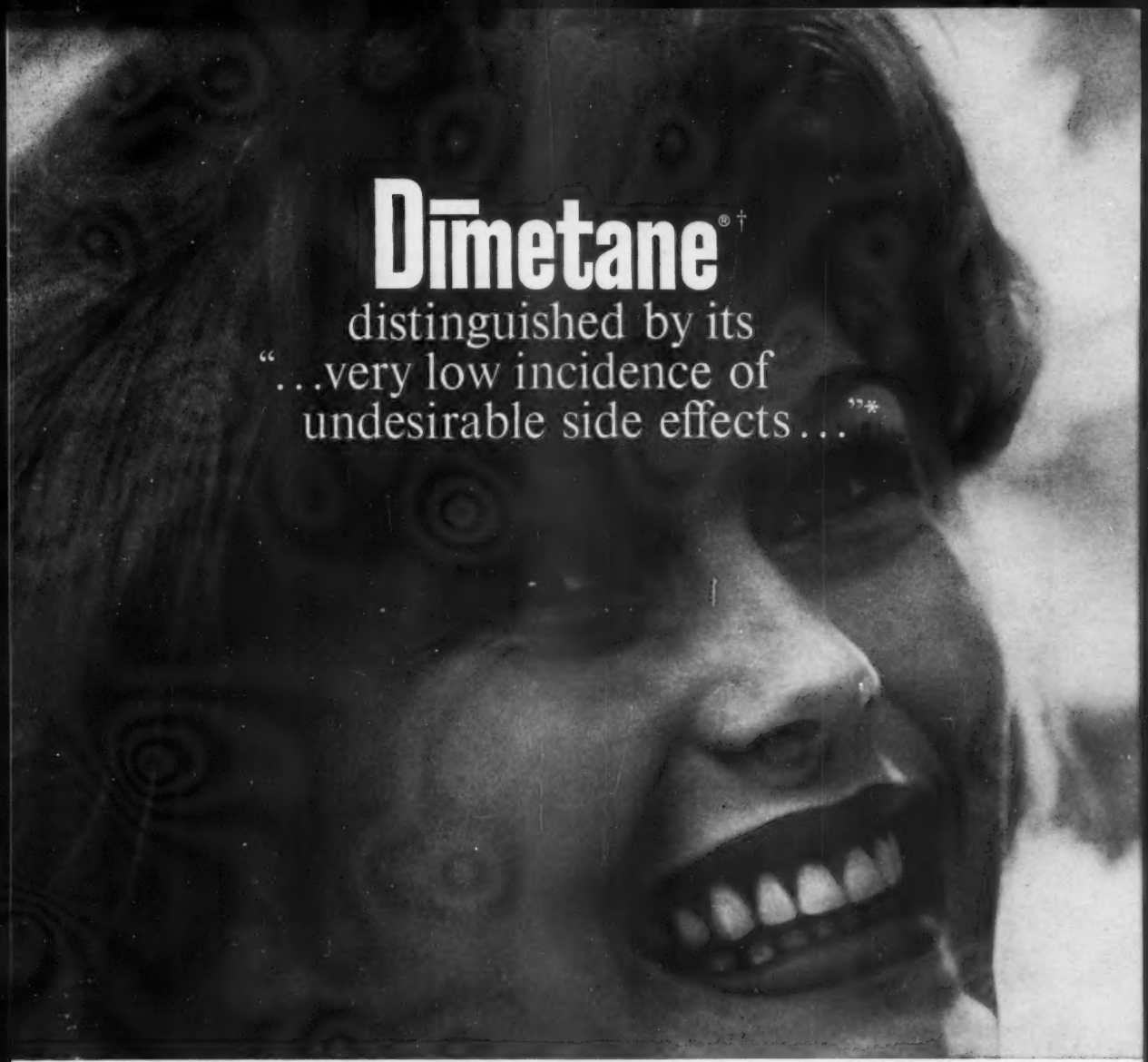
WM. H. PICKETT, M.D., seventy-one, retired Saginaw physician, died July 23, 1960.

Doctor Pickett, prior to his retirement in 1946, had served as director of the Saginaw County Contagious Hospital. He was a 1911 graduate of Atlanta Medical College, Georgia, and specialized in public health work.

EVERETT H. REED, M.D., Detroit physician, died June 26, 1960.

He was an Associate Member of Wayne County Medical Society and of the Michigan State Medical Society. (No further information available.)

(Continued on Page 1434)



even in allergic infants

FROM A CLINICAL STUDY* IN ANNALS OF ALLERGY

Patients	200 infants and children, ages 2 months to 14 years
Diagnosis	Perennial allergic rhinitis
Therapy	Dimetane Elixir
Results	in 149, *good* results / in 40, *fair* results
Side Effects	Encountered in *only* 7 patients (in all except one, the side effect was mild drowsiness)

In allergic patients *of all ages,* Dimetane has been shown to work with an effectiveness rate of about 90% and to produce an exceptionally low incidence of side effects. Complete clinical data are available on request to the Medical Department. *Supplied:* DIMETANE Extentabs® (12 mg.), Tablets (4 mg.), Elixir (2 mg./5 cc.), new DIMETANE-TEN Injectable (10 mg./cc.) or new DIMETANE-100 Injectable (100 mg./cc.).

Robins

*MC GOVERN, J. P., MC ELHENNEY, T. R., HALL, T. R., AND BURDON, K.D.: ANNALS OF ALLERGY 17:915, 1959.

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA/ETHICAL PHARMACEUTICALS OF MERIT SINCE 1878

† PARABROMDYLAMINE MALEATE

In Memoriam

(Continued from Page 1432)

CHARLES J. SOCALL, M.D., fifty-six, a Dearborn area practicing physician for thirty years, died July 5, 1960.

Doctor Socall was a graduate of the University of Michigan medical school in 1930.

He was a captain in the Army Medical Corps during World War II.

EDWARD STEIN, M.D., forty-five, an Oak Park eye, ear, nose and throat specialist, died July 19, 1960.

Doctor Stein was born in Detroit. He was graduated from the University of Michigan Medical school in 1937 and did postgraduate work in ophthalmology at the New York Post Graduate Medical School and Wayne State University. He interned at Wayne County General Hospital.

In addition to his medical affiliations, he was past president of Phi Lambda Kappa Medical Fraternity and the Detroit Alumni Club. He was a member of the board of directors for the Berkley Lions club, president of the Ferndale Stamp club, past president of the Michigan Bridge Association and was a member of the Oakwood lodge, B'nai B'rith.

During World War II, Doctor Stein served in the U. S. Army Air Corps and was awarded the Soldiers' Medal for Bravery.

B. H. VAN LEUVEN, M.D., Traverse City, died recently.

Doctor Van Leuven was a retired member of the Michigan State Medical Society. (No further information available.)

in common Gram-positive infections due to susceptible organisms

YOU CAN COUNT ON

TAO®*

(triacetyloleandomycin)

even in many resistant Staph*

1,928 published cases in the two years since TAO was released for general use show:

94.3% effectiveness in respiratory infections (617 cases including tonsillitis, staphylococcal and streptococcal pharyngitis, bronchitis, infectious asthma, broncho-pneumonia, lobar pneumonia, bronchiectasis, lung abscess, otitis.) **You can count on TAO.**

92% effectiveness in skin and soft tissue infections (900 cases including pyoderma, impetigo, acne, infected skin disorders, wounds, incisions and burns, furunculosis, abscess, cellulitis, chronic ulcer, adenitis.) **You can count on TAO.**

87.1% effectiveness in genitourinary infections (349 cases including urethritis, cystitis, pyelitis, pyelonephritis, orchitis, pelvic inflammation, acute gonococcal urethritis, lymphogranuloma venereum.) **You can count on TAO.**

75.8% effectiveness in diverse infections (62 cases including fever of undetermined origin, peritoneal abscess, osteitis, periarthritis, septic arthritis, staphylococcal enterocolitis, gastroenteritis, carriers of staphylococci.) **You can count on TAO.**

95.6% of 1,928 cases free of side effects—in the remaining 4.4%, reactions were chiefly mild gastrointestinal disturbances which seldom necessitated discontinuance of therapy.

*In 884 of 1,928 cases the causative organisms were mostly staphylococci. The majority of clinical isolates were found to be resistant to at least one of the commonly used antibiotics and many patients had failed to respond to previous therapy with one or more antibiotics. **TAO proved 93.4% effective in these 884 cases.**

Complete bibliography available on request.

DOSAGE: varies according to severity of infection. Usual adult dose—250 to 500 mg. q.i.d. Usual pediatric dose: 3-5 mg./lb. body weight every 6 hours.

NOTE: In some children, when TAO was administered at considerably higher than therapeutic levels for extended periods, transient-jaundice and other indications of liver dysfunction have been noted. A rapid and complete return to normal occurred when TAO was withdrawn.

SUPPLY: TAO CAPSULES—250 mg. and 125 mg., bottles of 60. TAO ORAL SUSPENSION—125 mg. per 5 cc. when reconstituted, palatable cherry flavor, 60 cc. bottles. TAO PEDIATRIC DROPS—100 mg. per cc. when reconstituted, flavorful; special calibrated dropper, 10 cc. bottles. INTRAMUSCULAR or INTRAVENOUS—10 cc. vials, as oleandomycin phosphate.

OTHER TAO FORMULATIONS ALSO AVAILABLE: TAO®-AC (Tao, analgesic, antihistaminic compound) capsules, bottles of 36. TAOMID® (Tao with Triple Sulfas)—tablets, bottles of 60. Oral Suspension—60 cc. bottles.

For nutritional support VITERRA® Vitamins and Minerals
Formulated from Pfizer's line of fine pharmaceutical products.

Roerig Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being™

What's she doing that's of medical interest?

She's drinking a glass of pure Florida orange juice. And that's important to her physician for several reasons.

How your patients obtain their vitamins or any of the other nutrients found in citrus fruits is of great medical interest — considering the fact there are so many wrong ways of doing it, so many substitutes and imitations for the real thing.

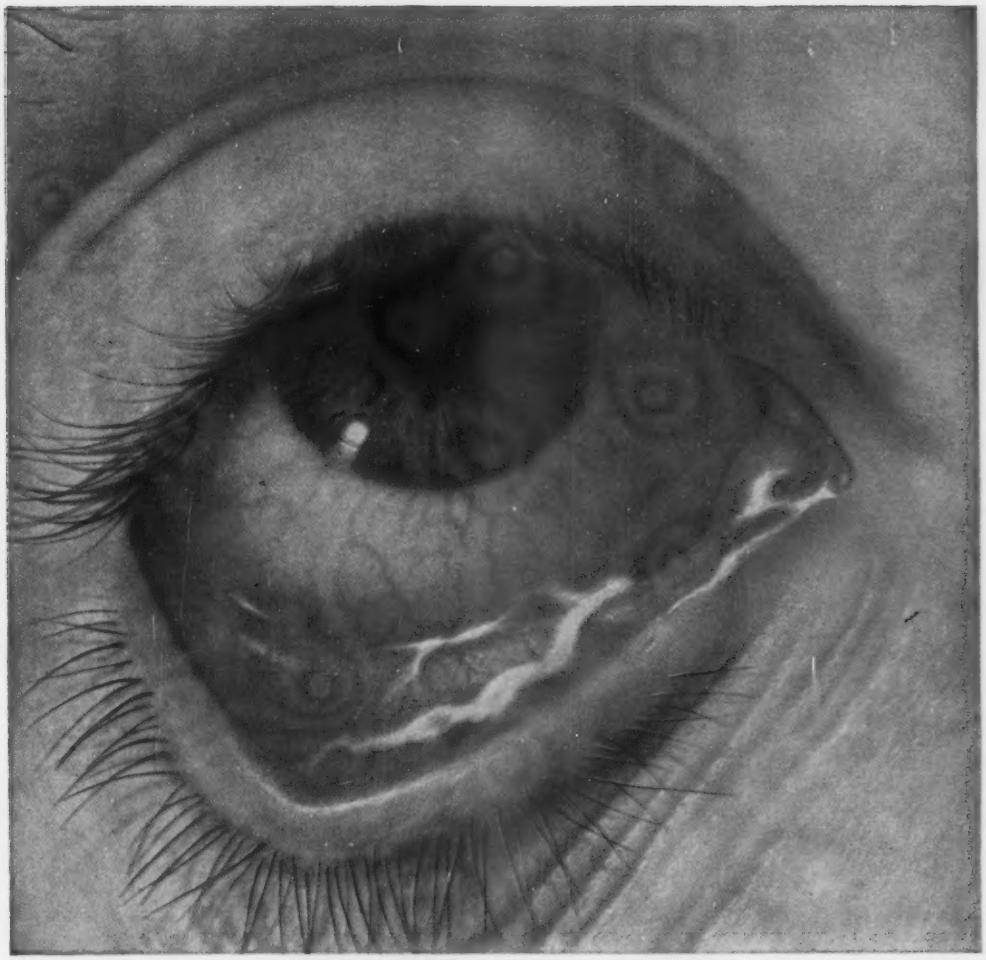
Actually, there's no better way for this young lady to obtain her vitamin C than by doing just what she is doing, for there's no better source than oranges and grapefruit ripened in the Florida sunshine. There's no substitute for the result of nature's own mysterious chemistry, flourishing in the warmth of this luxurious peninsula.

An obvious truth, you might say, but not so obvious to the parents of many teen-agers.

We know that a tall glass of orange juice is just about the best thing they can reach for when they raid the refrigerator. We also know that if you encourage this refreshing and healthful habit, you'll be helping patients to the finest between-meals drink there is.

Nothing has ever matched the quality of Florida citrus — watched over as it is by a State Commission that enforces the world's highest standards for quality in fresh, frozen, canned or cartoned citrus fruits and juices.

That's why the young lady's activities are of medical interest.



no irritating crystals[1] · uniform concentration in each drop[2]

STERILE OPHTHALMIC SOLUTION

NEO-HYDELTRASOL®

PREDNISOLONE 21-PHOSPHATE-NEOMYCIN SULFATE

2,000 TIMES MORE SOLUBLE THAN PREDNISOLONE OR HYDROCORTISONE

"The solution of prednisolone has the advantage over the suspension in that no crystalline residue is left in the patient's cul-de-sac or in his lashes . . . . The other advantage is that the patient does not have to shake the drops and is therefore sure of receiving a consistent dosage in each drop."[2]

1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

supplied: 0.5% Sterile Ophthalmic Solution NEO-HYDELTRASOL (with neomycin sulfate) and 0.5% Sterile Ophthalmic Solution HYDELTRASOL®. In 5 cc. and 2.5 cc. dropper vials. Also available as 0.25% Ophthalmic Ointment NEO-HYDELTRASOL (with neomycin sulfate) and 0.25% Ophthalmic Ointment HYDELTRASOL. In 3.5 Gm. tubes.

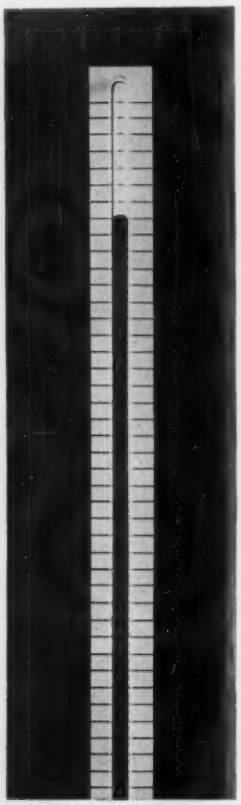
HYDELTRASOL and NEO-HYDELTRASOL are trademarks of Merck & Co., Inc.

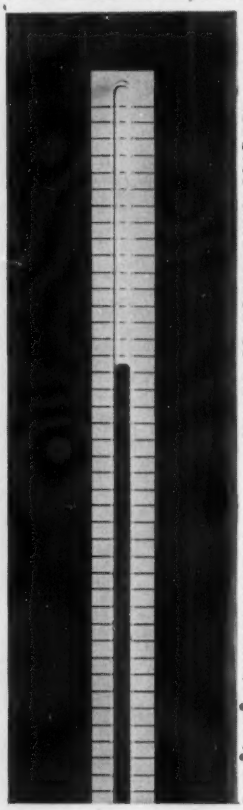
MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., Philadelphia 1, Pa.

for a smooth downward curve

New Rautrax-N results in prompt lowering of blood pressure.[1] Rautrax-N, a new and carefully developed antihypertensive-diuretic preparation, provides improved therapeutic action[1] plus enhanced diuretic safety for all degrees of essential hypertension. A combination of Raudixin and Naturetin, Rautrax-N facilitates the management of hypertension when rauwolfia alone proves inadequate, or when prolonged treatment, with or without associated edema, is indicated.

Naturetin, the diuretic of choice, also possesses marked antihypertensive properties, thus complementing the known antihypertensive action of Raudixin. In this way a lower dose of each component in Rautrax-N controls hypertension effectively with few side effects and greater margin of safety.[1-16]





Other advantages are a balanced electrolyte pattern[1-16] and the maintenance of a favorable urinary sodium-potassium excretion ratio.[2-16] Clinical studies[1-5] have shown that the diuretic component of Rautrax-N—Naturetin—has only a slight effect on serum potassium. The supplemental potassium chloride provides additional protection against potassium depletion which may occur during long term therapy.

Rautrax-N may be used alone or in conjunction with other antihypertensive drugs, such as ganglionic blocking agents, veratrum or hydralazine, when such regimens are needed in the occasionally difficult patient.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin (Squibb Rauwolfia Serpentina Whole Root) and 4 mg. Naturetin (Squibb Benzydroflumethiazide), with 400 mg. potassium chloride.

Dosage: Initially-1 to 4 tablets daily after meals. Maintenance-1 or 2 tablets daily after meals; maintenance dosage may range from 1 to 4 tablets daily. For complete instructions and precautions see package insert. Literature available on request.

References: 1. Reports to the Squibb Institute, 1960. 2. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 3. Stenberg, E. S., Jr.; Benedetti, A., and Forsham, P. H.: Op. cit. 5:46 (Feb.) 1960. 4. Fuchs, M.; Moyer, J. H., and Newman, G. E.: Op. cit. 5:55 (Feb.) 1960. 5. Marriott, H. J. L., and Schamroth, L.: Op. cit. 5:14 (Feb.) 1960. 6. Ira, G. H., Jr.; Shaw, D. M., and Bogdonoff, M. D.: North Carolina M. J. 21:19 (Jan.) 1960. 7. Cohen, B. M.: M. Times, to be published. 8. Breneman, G. M. and Keyes, J. W.: Henry Ford Hosp. M. Bull. 7:281 (Dec.) 1959. 9. Forsham, P. H.: Squibb Clin. Res. Notes 2:5 (Dec.) 1959. 10. Larson, E.: Op. cit. 2:10 (Dec.) 1959. 11. Kirkendall, W. M.: Op. cit. 2:11 (Dec.) 1959. 12. Yu, P. N.: Op. cit. 2:12 (Dec.) 1959. 13. Weiss, S.; Weiss, J., and Weiss, B.: Op. cit. 2:13 (Dec.) 1959. 14. Moser, M.: Op. cit. 2:13 (Dec.) 1959. 15. Kahn, A., and Grenblatt, I. J.: Op. cit. 2:15 (Dec.) 1959. 16. Grollman, A.: Monographs on Therapy 5:1 (Feb.) 1960.

Squibb Quality—the Priceless Ingredient

SQUIBB

new

The proved, effective antihypertensive—now combined with a safer, better diuretic

RAUTRAX-N®

Squibb Standardized Whole Root Rauwolfia Serpentina (Raudixin) and Benzydroflumethiazide (®Naturetin) with Potassium Chloride

Michigan M.D.'s in News

AIDS CITY PLANNING—Ralph A. Johnson, M.D., Detroit, has been appointed by Mayor Miriani to the Detroit City Plan Commission. Doctor Johnson will fill the four-year unexpired term of the late Charles G. Johnston, M.D.

* * *

NAMED TO COLLEGE BOARD—Rex A. Wilcox, M.D., of Alma, has been appointed to the Alma College Board of Trustees. Doctor Wilcox has served as president of the Alma school board and presently is chairman of the board of trustees of Alma's First Presbyterian Church.

* * *

WINS ART AWARD—Among the winners at the 23rd annual American Physicians Art Association Exhibit at Miami Beach was Theodore E. Palm, M.D., of Crystal Falls. Dr. Palm was one of two winners in the water color division with his exhibit, entitled "Street Scene."

Once again, the expansive art exhibit was held concurrent with the AMA annual meeting.

* * *

TRAMPOLINE WINNER—John S. DeTar, M.D., Milan, received two cups at the annual State AAU Trampoline Championships held this summer in Ann Arbor. The oldest performer in this AAU meet, Dr. DeTar took first place in the age group of 60 and under, and third place in the group of 18 and over. Dr. DeTar, who became interested in tram work about three years ago, has mastered about one-half of the 100 possible tricks, according to a news article in the *Ann Arbor News*.

* * *

SPEAK IN DENMARK—Two epidemiologists from Ann Arbor participated in the International Poliomyelitis Congress in Copenhagen, Denmark, in July. Gordon C. Brown, M.D., addressed the Congress on "Duration of Immunity with the Salk Vaccine," and W. W. Ackermann, M.D., on the "Chemistry of Virus Infections."

* * *

CHEST PHYSICIANS ELECT—Officers elected for the American College of Chest Physicians for the 1960-61 term included Winthrop N. Davey, M.D., Ann Arbor, who was re-elected Governor for Michigan.

The following physicians from Michigan received their Fellowship certificates on June 11: Francis S. Gerbasi, M.D., Detroit, Henry J. Kehoe, M.D., Detroit, Edward J. Klopp, M.D., Battle Creek, and Nathan Levitt, M.D., Detroit. Doctor Levitt also received a certificate of merit as Past-President of the Michigan Chapter.

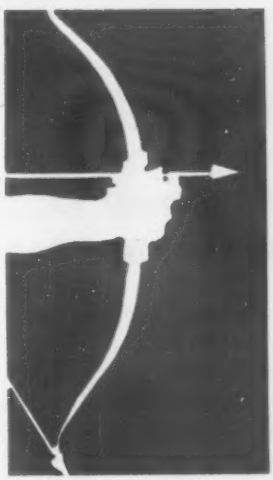
* * *

LEADS U. S. GROUP—Seward E. Miller, M.D., Ann Arbor, was chairman of the American delegation to the 13th International Congress on Occupational Health, July 25-29, in New York City. More than 3,000 attended from all over the world, including Iron Curtain countries.

* * *

HONOR WAYNE M.D.'S—Honorary memberships in the Detroit Otolaryngological Society were presented to four Wayne County doctors at the Society's recent golden jubilee dinner. The four were William S. Gonne, M.D., John W. Lawson, M.D., William S. Summers, M.D., and Walter Orr, M.D.

Contributions for this "News Briefs" department are invited from individual physicians, from county societies, and from other health organizations. Please direct your contributions to the Editor.



Photos used with patient's permission.

How new Dianabol rebuilt muscle tissue in this underweight, debilitated patient

Patient was weak and emaciated before Dianabol. R. C., age 51, weighed 160 pounds following surgery to close a perforated duodenal ulcer. His convalescence was slow and stormy, complicated by pneumonia of both lower lobes. Weak and washed out, he was considered a poor risk for further necessary surgery (cholecystectomy). Because a conventional low-fat diet and multiple-vitamin therapy failed to build up R. C. sufficiently, his physician prescribed Dianabol 5 mg. b.i.d.

Patient regains strength on Dianabol. In just two weeks R. C.'s appetite increased substantially; he had gained 9½ pounds of lean weight. His muscle tone was improved, he felt much stronger. After 4 weeks, he weighed 176 pounds. Biceps measurement increased from 10" to 11½". For the first time since onset of postoperative pneumonia, his chest was clear. Mr. C.'s physician reports: "He tolerated cholecystectomy very well and one week postop felt better than he has in the past 2 years."

(Continued from Page 1439)

MEDICAL TELEVISION SHOWS—The Michigan Health Council reports that the following topics were covered during the month of July on the weekly Sunday morning program over WJBK-TV, in Detroit: You and Your Driving (safe driving habits), To Have Dominion (Muscular Dystrophy), Tuesday's Child (Retarded Children), Paddle a Safe Canoe (water safety), and Teaching Johnny How to Swim.

* * *

U-M CONFERENCE ON FRACTURES—The University of Michigan will offer a Postgraduate Conference on Fractures November 10-11. The course is offered on the non-operative and operative treatment of fractures of the spine and extremities. Instruction will include basic anatomical background in the treatment of fractures, including demonstrations by anatomical specimens to illustrate the principles of bone and joint deformities following fractures, neuro-vascular dangers, location of sites for skeletal traction, and anatomical approaches to the bones and joints.

Types of splints and methods of traction will be demonstrated.

Fractures in children also will be discussed.

The program will be under the direction of Carl E. Badgley, M.D., assisted by his staff in the Division of Orthopedic Surgery, and by members of the staff in other surgical specialties.

Applications may be addressed to the Department of Postgraduate Medicine, University Hospital, Ann Arbor.

* * *

LIST U-M POSTGRADUATE COURSES—The University of Michigan department of postgraduate medicine reports the following courses and dates for 1960-61. Information regarding the courses will be mailed upon request. Write John M. Sheldon, M.D., Director, Department of Postgraduate Medicine, Room 1610, University Hospital, Ann Arbor.

Courses	*Dates*
(Intermittent Courses)	
Anatomy (Thursdays)	February 16-May 25
Clinical Conferences (Wednesdays) (Including all Clinical Fields)	October 5-February 22
Internal Medicine	
Electrocardiography & Heart Diseases (Tuesday evenings)	September 27-February 7
Selected Clinical Topics (Tuesday evenings)	February 14-May 2
Clinical Internal Medicine (Thursday afternoons)	October 6-March 9
Psychiatry for Internists (Wednesdays) (12 weekly sessions omitting Dec. 21 and 28)	October 12-January 11
(Continuous Courses)	
Internal Medicine	
Gastroenterology	February 27-March 3
Cardiology (American Heart Association)	March 13-17
Diseases of the Heart	March 20-24
Electrocardiographic Diagnosis	March 27-April 1
Diseases of the Blood	April 3-7
Pulmonary Diseases	April 10, 11, 12
Allergy	April 13, 14, 15
Endocrinology & Metabolism	April 17-21
Recent Advances in Therapeutics	April 24-28
Rheumatology	April 24, 25, 26

Infertility and Endocrinology	March 9-10
Neurology, Clinical	March 13-14
Obstetrics and Gynecology	January 25, 26, 27
Ophthalmology	April 24, 25, 26
Otolaryngology	April 20, 21, 22
Orthopedic Surgery (Fractures)	November 10-11
Pediatrics	January 23, 24, 25
Psychiatry	February 20, 21
Radiology, Diagnostic	April 3, 4, 5
Radioactive Isotopes, Clinical Use of	As arranged
Basic Sciences and their Clinical Correlation and Application	September 26-June 2

(These courses are presented in a block system, making it possible not only for residents from affiliated and other hospitals to attend but, also, for practicing physicians to enroll for any or all sections. All of the sections are closely correlated and integrated with their clinical application.)

Pathology	September 26-December 16
Bacteriology	January 2-13
Biophysics	January 16-27
Endocrinology	January 30-February 10
Biochemistry	February 13-March 3
Physiology	March 6-17
Pharmacology	March 20-31
(Spring Vacation April 1-10, 1961)	
Anatomy (Obstetrics & Gynecology)	April 10-29
Anatomy (Surgery)	April 10-June 2

MEDICAL MEETINGS U.S.A.

American Medical Writer's Association, November 18 and 19, Hotel Morrison, Chicago, Illinois; Harold Swanberg, M.D., 510 Maine Street, Quincy, Illinois, Secretary.

Indiana State Medical Association, October 2-5, Sheraton Hotel, French Lick, Indiana; J. A. Waggener, 1021 Hume Mansur Building, Indianapolis 4, Executive Secretary.

American College of Surgeons 47th Annual Clinical Conference, October 2-6, Chicago.

Central Association of Obstetricians and Gynecologists, October 6-8, Kansas City, Missouri; Herman L. Gardner, M.D., 633 Hermann Professional Building, Houston 25, Secretary-Treasurer.

American Otorhinological Society for Plastic Surgery, October 9, Conrad Hilton Hotel, Chicago.

American Academy of Ophthalmology & Otolaryngology, October 9-14, Palmer House, Chicago; William L. Benedict, M.D., 15 Second Street, N.W., Rochester, Minnesota, Executive Secretary.

American Medical Association Industrial Health Conference, October 10-12, Hotel Charlotte, Charlotte, North Carolina.

Regional State Medical Journal Editors Conference, October 15-16, Phoenix Hotel, Lexington, Kentucky; J. P. Sanford, 1169 Eastern Parkway, Louisville 17, Managing Editor, Journal of Kentucky State Medical Association.

American Academy of Pediatrics, October 17-20, Palmer House, Chicago; E. H. Christopherson, M.D., 1801 Hinman Avenue, Evanston, Illinois, Executive Director.

National Safety Congress, October 17-21, Chicago; R. L. Forney, 425 North Michigan Avenue, Chicago 11, Secretary.

Postgraduate Course in Laryngology and Bronchoesophagology, October 17-29, The Department of Otolaryngology, University of Illinois College of Medicine, Chicago, Illinois;

(Continued on Page 1444)

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Write Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12.

Clinical Conference on Gynecologic Cancer, October 21 and 22, The University of Texas M.D. Anderson Hospital and Tumor Institute, Houston.

American Heart Association, Inc., October 21, 25, Jefferson Hotel, St. Louis; Rome A. Betts, 44 East 23rd Street, New York 10, Executive Director.

Mid-West Forum on Allergy, October 22-23, Penn-Sheraton Hotel, Pittsburgh; Macy I. Levine, 3347 Forbes Avenue, Pittsburgh 13, Program Chairman.

American College of Gastroenterology Annual Course in Postgraduate Gastroenterology, October 27-29, Bellevue-Stratford Hotel, Philadelphia, Pennsylvania. Write American College of Gastroenterology, 33 West 60th Street, New York 23.

67th Annual Convention of Military Surgeons, October 31-November 2, Mayflower Hotel, Washington, D. C.

13th Annual Conference on Electrical Techniques in Medicine and Biology, October 31-November 1-2, Sheraton-Park Hotel, Washington, D. C.

88th Annual Meeting of the American Public Health Association, October 31-November 4, Civic Auditorium, San Francisco, California; Write American Public Health Association, 1790 Broadway, New York.

Advances in Clinical Chemistry Methods, November 9-11, Frank E. Bunts Educational Institute, 2020 East 93rd Street, Cleveland 6.

American Medical Association Clinical Meeting, November 28-December 1, Washington, D. C.

American Academy of Dermatology and Syphilology, December 3-8, Palmer House, Chicago; Robert R. Kierland, M.D., First National Bank Building, Rochester, Minnesota, Secretary-Treasurer.

Bronson Hospital Fall Clinic Day, Kalamazoo, October 27, 1960.

* * *

BRONSON HOSPITAL FALL CLINIC DAY— Bronson Methodist Hospital of Kalamazoo, Michigan, is planning a "Fall Clinical Conference" on October 27, 1960. This conference will be devoted to pediatric problems and will feature a number of outstanding consultants for morning clinics and afternoon panel discussions in addition to an evening presentation.

* * *

NEW U-M DEAN—Myron E. Wegman, M.D., secretary-general of the Pan American Sanitary Bureau and of the World Health Organization Regional Office for the Americas, is the new dean of the School of Public Health at the University of Michigan. He succeeds Dean Henry F. Vaughan, who retired a year ago.

"In Myron Wegman, we have a new dean held in high esteem in medical, public health, governmental and foundation circles throughout the country," Marvin Niehuss, vice president and dean of faculties at the University, said.

Dean Wegman received his doctor of medicine degree at Yale in 1932 and his master of public health degree at The

Johns Hopkins University five years later. Author of more than seventy articles in professional journals, he was awarded the Clifford Grillee gold medal in 1958 for "outstanding service to the American Academy of Pediatrics." The new dean is chairman of the editorial board of the *American Journal of Public Health*, a contributing editor of *Pediatrics*, and a member of the editorial board of *Advances in Pediatrics*.

Doctor Wegman has taught in the public health departments of Columbia, Cornell and Johns Hopkins universities, and in medicine at Yale, the School of Tropical Medicine in Puerto Rico, and at Louisiana State University.

* * *

MEDICAL SEMINAR CRUISE—The Duke University Medical School is sponsoring a postgraduate Medical Seminar Cruise to the West Indies this fall aboard the new *Kungsholm*, Sweden's largest transatlantic liner and cruise ship, which will sail from New York City on November 9, will visit the Virgin Islands and San Juan, Puerto Rico, and will return to New York on November 18. Shipboard lectures on various subjects in medicine, pediatrics and surgery will be given. The instructional program will provide twenty hours credit toward postgraduate requirements of the American Academy of General Practice.

* * *

LIFE MEMBERSHIP CITATION—Ernest C. Laetz, business manager of The University of Michigan Hospital, has been voted life membership in the American Association of Hospital Accountants. Laetz received the honor and citation at the 18th Annual Institute on Hospital Accounting and Finance in Bloomington, Indiana. He was recognized for program contributions and service as executive officer and board member of the association. He was institute chairman last year.

* * *

AMERICAN COLLEGE OF PHYSICIANS—The American College of Physicians has announced six Postgraduate courses and locations: Columbus, Ohio, Sept. 19-23; Kettering Institute, New York, Oct. 10-14; Salt Lake City, November; Seattle, Jan. 9-13, 1961; Columbia University, New York, Jan. 16-20; and Oklahoma City, Feb. 20-24.

* * *

OFFER RESEARCH GRANTS—Applications for grants for medical and social research in tuberculosis and other respiratory diseases are now being accepted by the National Tuberculosis Association, through its medical section, the American Thoracic Society (formerly the American Trudeau Society). December 15, 1960, is the deadline for submission of applications for the grant year July 1, 1961, through June 30, 1962. For information, write the Division of Research & Statistics, American Thoracic Society, 1790 Broadway, New York 19, New York.

* * *

VIITH INTERNATIONAL CONGRESS—The seventh international Congress on Oto-Rhion-Laryngology will be held in Paris, France, July 23 to 29, 1961. For further information write: Secretariat du Congress; 6 Avenue Mac Mahon, Paris.

The basic question is whether we are to discard the system that has brought us to our present level of health care, and promises much higher levels for the future, in favor of a regulatory strait jacket that stifles initiative, bureaucratizes research, and promises nothing for the future.

You can't go places in a strait jacket...!

An editorial writer recently made the interesting suggestion that the pharmaceutical industry might have avoided much of the current public interest in its affairs if they had simply restricted themselves to making aspirin tablets and rubbing alcohol, competing only by debating which aspirin dissolves faster. • No one has seriously suggested a return to the "good old days" in therapeutics, but there are apparently some who would like to destroy the system that has produced for us the finest medical care in the history of the world. Whether they attack the freedom of the patient to choose his physician, the freedom of the physician in the practice of his profession, or the freedom of the pharmaceutical industry is immaterial. • If the desideratum is simply maintenance of the status quo in health care, medicine might well have rested on its 19th century laurels and the pharmaceutical industry on aspirin tablets and rubbing alcohol.

This message is brought to you on behalf of the producers of prescription drugs as a service to the medical profession. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D. C.

Doctors, too, like "Premarin."

THE doctor's room in the hospital is used for a variety of reasons. Most any morning, you will find the internist talking with the surgeon, the resident discussing a case with the gynecologist, or the pediatrician in for a cigarette. It's sort of a club, this room, and it's a good place to get the low-down on "Premarin" therapy.

If you listen, you'll learn not only that doctors like "Premarin," but *why* they like it.

The reasons are fairly simple. Doctors like "Premarin," in the first place, because it really relieves the symptoms of the menopause. It doesn't just mask them – it replaces what the patient lacks – natural estrogen. Furthermore, if the patient is suffering from headache, insomnia, and arthritic-like symptoms due to estrogen deficiency, "Premarin" takes care of that, too.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

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COMMUNICATIONS

Commissioner Blackford's Letter

Mr. L. Gordon Goodrich
Executive Vice President
Michigan Medical Service
Dear Mr. Goodrich:

The Michigan Department of Insurance has reviewed the request filed with us for an increase in subscribers' rates under the various Michigan Medical Service contracts. As noted in your letter of May 3, 1960, the adjusted rates submitted result in an over-all increase of 19.5 per cent as projected for a two-year period commencing July 1, 1960.

Our examination of the books and records of the Michigan Medical Service has established the fact that the financial position of your corporation is serious and that there exists a need for adjustment of rates to meet this emergency situation.

Recognition has to be given to the fact that health care costs have increased tremendously in recent years along with higher utilization of health care services. At the same time we must consider the ability of the individual subscriber, particularly the senior citizen, to purchase the services made available through your plan. While we recognize the seriousness of your financial plight, we do not believe that the subscriber should bear the full burden of resolving the immediate financial crisis.

For this reason, I cannot approve your Board's request for increases based on a two-year projection. Instead, we have applied the annual claim increment factor and other assumptions utilized in your computations to determine that a one-year projection would amount to 11.5 per cent. This does not include the 3.5 per cent allowance to rebuild surplus, contained in your projection, which we feel compelled to disallow.

If you will submit to us a schedule of rates based on 11.5 per cent, approval will be granted effective July 1, 1960, to run for one year. However, our approval for a rate increase is qualified by the requirement that your Board institute such action as may be necessary to develop a program that will minimize rising costs to your subscribers. On or before July 1, 1961, it will be the responsibility of Michigan Medical Service to present to this Department a program that will develop a more stable rate and benefit structure.

The Department is aware that many of our citizens hold to the opinion that pre-payment plans have been abused in such areas as discriminatory pricing policy, payments by Blue Shield for services not rendered, and excessive use of diagnostic services. We are not in a position to determine the extent and relative importance that should be assessed to these factors, but careful review of these, as well as other areas, should be undertaken and procedures established to prevent misuse or abuse. However, our approval for a rate increase is qualified by the requirement that your Board institute such action as may be necessary to develop a program that will minimize rising costs to your subscribers.

In view of our increasing birth rate, reclining mortality rate and increase in population because of immigration from other states, it is apparent that we shall experience for some

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time to come an increasing demand for medical care and the use of medical care facilities. It is imperative that we provide to our citizens the assurance that health care will be made available to them, when they need it and at the lowest possible cost.

Because approximately one-half of Michigan's population participates in the Blue Shield Plan, it is important that you work with those persons most intimately concerned with the services your plan provides. Any program developed should be through the cooperative efforts of the Michigan Medical Service and other groups including the medical profession, trade union organizations, employer groups and representatives of the general public. I am sure you will find them responsive to the obligation to work together in making the Blue Shield Plan operate effectively and with such economies as may be possible.

June 15, 1960

Sincerely,
FRANK BLACKFORD
Commissioner of Insurance

Wilfrid Haughey, M.D.
The Editor, Journal of the Michigan State Medical Society
Dear Dr. Haughey,

Thank you for sending the three copies of your May issue, incorporating the extracts from my article "Old Age; The Completion of a Life Cycle." I think the issue is an excellent one and congratulate you on presenting it.

There is one minor error so far as my description is concerned, which is that my qualifications are given as M.D., F.R.C.P. The latter is a great distinction to which I have not yet attained, and lest it should be thought that I wish to sail under false colors, I would be grateful if you could make a small amendment, to be published in your next issue, to the effect that my qualifications are M.D., M.R.C.P.

With my renewed thanks and kind regards,

Yours sincerely,
T. N. RUDD, M.D., M.R.C.P.
Consultant Physician, Geriatric Unit.

Shirley, Southhampton
June 21, 1960

Dear MSMS Member:

I should like to call your attention to an investment opportunity that pays 3¾ per cent per annum.

I am referring to United States Savings Bonds—one of the safest investments in the world. Briefly, U. S. Savings Bonds come in two types, each serves a different purpose—

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Sincerely,
MILTON A. DARLING, M.D.
President, MSMS

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ONE *and only ONE*

Timed AMO*dex* CAPSULE

PER DAY *will economically*

control appetite in weight reduction or relieve the nervous symptoms of anxiety and the underlying depression.

Timed AMO*dex CAPSULES* (Testagar) furnish a controlled uniform action. The medications provide prolonged, continuous therapeutic effect from active ingredients over a period of 6 to 10 hours.

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Dextro-amphetamine hydrochloride	15 mg.,
Amobarbital	60 mg.

PROTRACTED THERAPEUTIC EFFECT

Before the development of *Timed* AMO*dex* (Testagar) the usual dose of Dextro-amphetamine hydrochloride, for the control of appetite, was one 5 mg. tablet two or three times a day. The usual dose of Amobarbital ranged from 20 to 40 mg., two or three times a day. On such a dosage regimen the absorption of the drugs, after ingestion, takes place quite rapidly. The therapeutic activity occurs within one-half to one hour. When the therapeutic peak is reached, a gradual decline takes place. At this point, the patient should receive another dose of medication . . . the cycle is then repeated.

Patients frequently fail to follow the physician's instructions. They take medication at irregular intervals. When this occurs with drugs such as dextro-amphetamine sulfate, phosphate or hydrochloride, excitation may result. A balanced combination of Dextro-amphetamine hydrochloride, **the preferred salt,** plus a balanced daily dose of Amobarbital will give the expected therapeutic results *without* excitation.

Timed AMO*dex*, after ingestion, releases Dextro-amphetamine Hydrochloride and Amobarbital steadily and uniformly over a period of 6 to 10 hours. Therefore, the physician may dispense with the usual dosage schedule thereby *attaining better control of therapy*. The patient will receive the benefits of even and sustained therapeutic effects. Side reactions such as anxiety and excitation are greatly minimized.

AMO*dex* ADVANTAGES

- HIGH-LEVEL ANOREXIGENIC ACTIVITY WITHOUT NERVOUS EXCITATION
- SMOOTH, UNIFORM ACTION
- THERAPEUTIC EFFECT LASTING 6 TO 10 HOURS
- ONLY ONE DOSE DAILY
- CLINICALLY ECONOMICAL TO THE PATIENT

ACTION AND USES

Timed AMO*dex CAPSULES* (Testagar) supply the antidepressant and mood-elevating effects of Dextro-amphetamine hydrochloride and the calming action of Amobarbital. *Timed* AMO*dex* elevates the mood, relieves nervous tension, restores emotional stability and the capacity for mental and physical effort.

INDICATIONS

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DOSAGE The Daily Dose of *Timed* AMO*dex* (Testagar) IS ONE CAPSULE ON ARISING OR AT BREAKFAST.

SUPPLIED Bottles of 100 and 1000 capsules, available at all pharmacies. Also supplied in half strength as *Timed* AMO*dex*, Jr.

Timed AMO*dex CAPSULES* are manufactured under these patent numbers:
2,736,682 – 2,809,916
2,809,917 – 2,809,918
Which provide prolonged, continuous therapeutic effect over a period of 6-10 hours

SAMPLES AND LITERATURE UPON REQUEST

Testagar & co., inc. 1354 W. Lafayette Blvd. Detroit 26, Michigan

Michigan Authors

Andrew F. Caughey, Jr., M.D., Detroit, "Perforation of the Newborn Stomach," *Obstetrics and Gynecology*, June, 1960.

Melvin L. Selzer, M.D., Ann Arbor, "The Happy College Student Myth: Psychiatric Implications," AMA *Archives of General Psychiatry*, February, 1960.

Paul L. Wolf, M.D. and **Murray B. Levin, M.D.,** Detroit, "Shoeshin Beriberi," *The New England Journal of Medicine*, June 30, 1960.

Robert K. Nixon, M.D., and **Robert J. Priest, M.D.,** Detroit, "Familial Recurring Polyserositis Simulating Acute Surgical Condition of The Abdomen," *The New England Journal of Medicine*, July 7, 1960.

James H. Beaton, M.D., Reinard P. Nanzig, M.D., and **Charles W. Aldridge, Jr., M.D.,** Grand Rapids, "The Maylard Incision in Obstetrics and Gynecologic Practice," *Journal of the International College of Surgeons*, July, 1960.

J. Reimer Wolter, M.D., Ann Arbor, "Nerves of the Normal Human Choroid," *Archives of Ophthalmology*, July, 1960.

The Doctor's Library

Acknowledgments of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

ENCYCLOPEDIA OF MEDICAL SYNDROMES. By Robert H. Durham, M.D., F.A.C.P., Physician-in-Charge, Division of General Medicine, Henry Ford Hospital, Detroit. Foreword by T. R. Harrison, M.D. Professor and Chairman, Department of Medicine, Medical College of Alabama, Birmingham. New York: Paul B. Hoeber, Inc., Medical Division of Harper & Brothers, 1960. Price, $13.50.

The word syndrome and its technical meaning signifies the usefulness of this new book in a new encyclopedic field. Groups of diseases, groups of symptoms, groups of abnormal circumstances or conditions may (many or a few) be grouped into a few frequently recurring conditions which is not a specific disease but is recognized as a "syndrome." The tendency or the disability or the occurrence may give a name to the particular group of conditions under consideration. There is probably no limit to the items which may be considered.

Dr. Durham, the author, is the director of internal medicine in Henry Ford Hospital in Detroit. He and his friends have gathered together almost 1,000 condition syndromes, which are collected with short but revealing description, references to other names and references to places in literature where the description may be found.

This work is original, not a rewriting of anything and probably most of these syndromes cannot be found listed in any dictionary or textbook. This has been a gigantic task and well done. It should be a very valuable reference book especially to the diagnostician or the student. Another Michigan-produced book.

YOUR HEART. A Handbook for Laymen. By H. M. Marvin, M.D., Associate Clinical Professor of Medicine, Yale University School of Medicine; Past President, American Heart Association; former member National Advisory Heart Council (U.S. Public Health Service). 335 pages. Garden City, New York: Doubleday & Company, Inc., 1960.

This excellent volume is written for the layman interested in, or himself afflicted, with heart disease.

The anatomy and physiology of the heart, the more common types of heart disease, surgical and medical treatment, and diagnostic procedures are well presented. Unfortunately, there are too few illustrations. There is some repetition in the chapters dealing with the various heart conditions. This was done intentionally by the author. The reader is in this way adequately informed by reading only the chapter dealing with his specific condition.

The author has the ability—the talent to simplify without seeming to "talk down" to the reader. The language is

non-medical for the most part with medical terms subtly introduced and clearly defined.

A fine glossary is appended.

The book is doubly valuable to the busy physician. A life-saver, perhaps for the patient, it increases the patient's understanding of his condition, treatment and prognosis, thereby assuring his co-operation and assuaging his many fears. A time-saver for the physician, it eliminates the need for repeated detailed explanation to the patient and his family.

This book should definitely be on the office bookshelf for patients to borrow and read.

L.P.S.

EXPERIMENTS AND OBSERVATIONS ON THE GASTRIC JUICE AND THE PHYSIOLOGY OF DIGESTION. By William Beaumont, M.D., Surgeon in the United States Army. Facsimile of the original edition of 1833 together with a biographical essay, A Pioneer American Physiologist, by Sir William Osler. New York: Dover Publications, Inc. 1960. Price, $1.50.

This stiff paper covered volume is a facsimile of the original publication by William Beaumont in 1833, listing all of his observations and experiments and studies with a preface and introduction and beginning on page 31, preliminary observations, experiments, microscopic examination, in all occupying 275 pages. In addition, at the beginning of the book, is an essay by William Osler, M.D., a pioneer American physiologist, who presented the address at the St. Louis Medical Society, October 4, 1902.

This is a very interesting and historically valuable book of a special interest to Michigan for several reasons. Beaumont did his work at Mackinac Island in Michigan and much of the research work in bringing this material up to date has been done here in Michigan. The Michigan State Medical Society has been instrumental in acquiring this property, originally the American Fur Company, and restoring it to its original form. We recommend this book for interesting reading material.

HELP-BRINGERS: Versatile Physicians of New Jersey. By Fred B. Rogers, M.D., Temple University School of Medicine, Philadelphia, Pennsylvania. Foreword by Henry A. Davidson, M.D., Editor, *Journal of the Medical Society of New Jersey*. New York—Washington—Hollywood: Vantage Press, 1960. Price, $2.95.

Doctors of medicine, more or less, have other interesting avocations and sometimes even entirely different methods of life or activities. This book describes the life and activities of twelve New Jersey physicians who were many other things. One was a friend of Benjamin Franklin; others were a Tory satirist, a general, a governor, a congressman, a poet, and so on. The stories are most interesting and encouraging, as showing that the medical man, in addition to being a worthwhile physician, has many other occupations.

The diagnosis of cancer is made by the alert physician with a high index of suspicion who uses skillfully a small number of standard instruments in his office.

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GENERAL PRACTITIONER—Associate for established practice in Albion, Michigan, located southern part of lower peninsula, approximately half-way between Detroit and Chicago on U. S. Highway; approximately 15,000 population. Locum tenens acceptable, permanent preferred. Other opportunities also available. Apply G. J. Durham, Administrator, Sheldon Memorial Hospital, Albion, Michigan.

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FOR RENT: Five-room medical suite in clinic type building. Associate with established dentist. Formerly occupied by physician for ten years. X-ray facilities available. Located in Highland Park between Puritan and Six Mile Road at 16350 Hamilton. Occupancy Nov. 1, 1960. Phone Superior 8-2010, E. R. Lorence, D.D.S.

WANTED DOCTORS FOR GROUP PRACTICE **in Southern California board-certified in internal medicine, pediatrics, otolaryngology, orthopedics and ophthalmology. Work with board specialists in combined hospital and clinic facilities. Starting salary open with progressive pay scale, incentive participation and partnership beginning fourth year with full participation, plus many fringe benefits including retirement. Write, Medical Director, 130 North La Cienega, Los Angeles 48, California.**

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ASSISTANT MEDICAL SUPERINTENDENT — 1900-bed epileptic hospital. Prefer past administrative experience. Diplomate in Neurology or Psychiatry desirable but not mandatory. Retirement plan, paid vacation and sick leave. Excellent location for year round sports and recreational activities. Write to Willard W. Dickerson, M.D., Medical Superintendent, Caro State Hospital, Caro, Michigan.

OBSTETRICS AND GYNECOLOGY—Approved three-year residency, established 1929. First-year positions available July 1, 1961. Excellent clinical material. Open to graduates of accredited medical schools and approved rotating internships. Salary $4800 to $5700. Apply to Administrator, Crittenton General Hospital, 1550 Tuxedo, Detroit 6, Michigan.

FOR SALE: Income property. Five apartments and doctor's office, suitable for one or two M.D.'s. So used for 25 years. Property in good repair, location in St. Louis, Michigan, ½ block from the main street. Terms can be arranged for a well-qualified and responsible M.D. Suggest a visit to the area and meeting local medical group and business people. If interested, contact A. D. Hobbs, M.D., St. Louis, Michigan.

FOR SALE—Hospital and office equipment. (1) 200 MA rotating anode unit with motor driven table, and 10 MA fluoroscopy tube, developing tank casettes, hangers, aprons, gloves, etc. (2) McKesson anesthesia and suction T & A unit, Model P-595. (3) Beck-Lee direct writer E.K.G. (4) Jones metabolator. (5) Bausch & Lomb binocular microscope. (6) Many other items, including full complement of surgical instruments. Contact: A. J. McGregor, M.D., Brighton, Michigan.

FOR SALE: Nearly new Picker Luxury Model Anatomatic 100 ma., diagnostic x-ray with automatic settings, by MSMS member who finds a new hospital installation nearby makes his own equipment unnecessary. Write Box 206-M, Holland, Michigan.

FOR RENT or SALE—Brick-veneer frame building, formerly used as a general hospital. Quite acceptable for a nursing home, or the care of the aged, ill or otherwise. One floor construction with full basement, 6015 square feet floor space; heat—oil steam, insulated; standard call system in each room. Part new construction; part completely remodelled. See it in Omer, Michigan. Contact: Hugh O. Staley, M.D., Omer, Michigan. Telephone OLive 3-2441.

Index to Advertisers

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pHisoAc is available in 1½ oz. tubes and pHisoHex is available in 5 oz. plastic squeeze bottles and in bottles of 16 oz.

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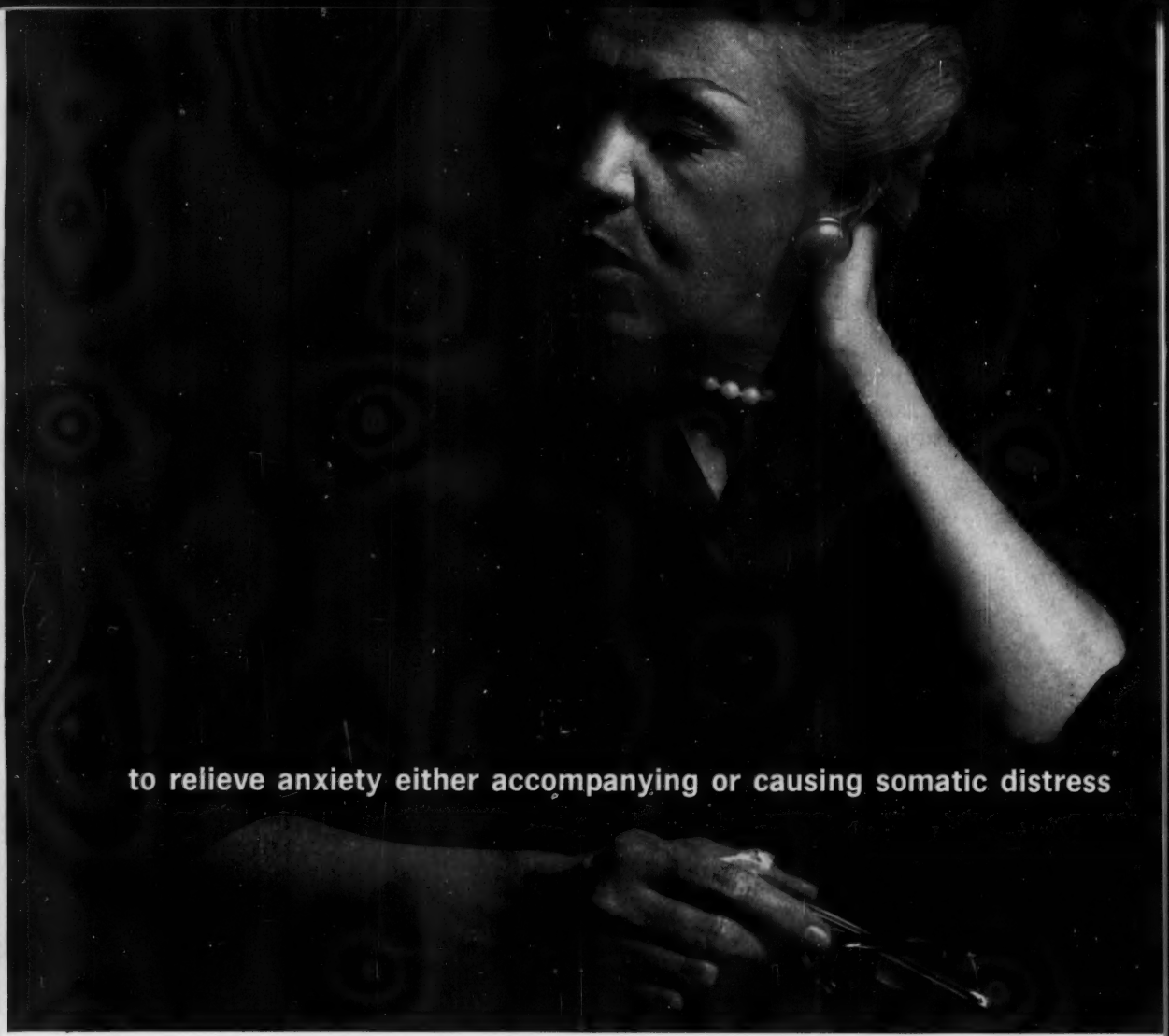

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N.B.: For further information on dosage, side effects, cautions and contraindications, see available comprehensive literature, *Physicians' Desk Reference,* or your S.K.F. representative. Full information is also on file with your pharmacist.

1. Marx, F.J., in *Trifluoperazine: Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959, p. 89.
2. Winkelman, N.W., Jr.: *ibid.*, p. 78.

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